AD0212161C3

Service Manual

Portable CD Player

COMPACT disc DIGITAL AUDIO

SL-CT700GD / SL-CT700GK

Colours

(A).....Blue Type
(R).....Red Type
(S).....Silver Type
(W).....White Type

SPECIFICATIONS

Specifications

Audio (CD-DA)
No. of channels: 2 channels (left and right, stereo)
Frequency response: 20 to 20,000 Hz (+0.5 dB to −1.5 dB)
Output voltage: 0.6 V (50 kΩ)
S/N: More than 96 dB
Wow and flutter: Below measurable limit
DA converter: 1 bit, MASH
Headphones output level: RMS max. 8 mW+8 mW/16 Ω (adjustable)

Pickup
Light source: Semiconductor laser
Wavelength: 780 nm

MP3
Supported bit-rates: 32 kbps to 320 kbps (128 kbps is recommended)
Supported sampling frequency: 48 kHz/44.1 kHz/32 kHz
Maximum number of items (sum of albums and tracks): 999
Maximum album levels: 100

General
Operational temperature range: 0 – 40 degree
Rechargeable temperature range: 5 – 40 degree
Power supply:
DC input (via included AC adaptor); DC 4.5 V
AC adaptor input;
SL-CT700GD; AC 220 V, 60 Hz
SL-CT700GK; AC 220 V, 50 Hz

Power consumption:
Using AC adaptor (MP3/CD-DA); 3.3 W/3.3 W
Recharging; 5.2 W

Play time:
[Approximate operating time in hours (playing MP3 at the recommended bit-rate of 128 kbps, with HOLD on and EQ canceled, at 25 degree on a flat, stable surface)]
Batteries used: MP3 disc/CD-DA disc
2 Optional alkaline batteries (LR6); Approx. 67/47 h
2 Supplied rechargeable batteries; Approx. 17/11 h
2 Supplied rechargeable and 2 alkaline batteries; Approx. 85/58 h
• The play time may be less depending on the operating conditions.
• Play time will be considerably reduced when playing CD-RW.
Recharging time: Approx. 2 to 3 h
Dimensions (W × H × D): 134.4 × 16.9 × 133.8 mm
Mass: 204 g (with batteries)
157 g (without batteries)

Notes: Specifications are subject to change without notice.
Mass and dimensions are approximate.

Note on CD-R and CD-RW
This unit can play CD-R and CD-RW recorded with CD-DA or MP3. Use an audio recording disc for CD-DA and finalize* it when you finish recording. The unit may not be able to play some discs due to the condition of the recording.
* A process performed after recording that enables CD-R/CD-RW players to play audio CD-R and CD-RW.

Panasonic

1. Accessories

- AC adaptor for SL-CT700GD (N0JCCE000005).....1 pc.
- AC adaptor for SL-CT700GK (N0JCCE000001).....1 pc.
- Stereo earphones (L0BAB0000170).....1 pc.
- Wired remote control (N2QCBD000028).....1 pc.
- External battery case (RFA1821-H).....1 pc.
- Rechargeable batteries (with case) (RP-BP61GY-S).....2 pcs.
- Soft case

(RFC0071-H).....1 pc.

2. Location of Controls and Connection to Other Equipment

3. Precaution of Laser Diode

Caution:

This product utilizes a laser diode with the unit turned on, invisible laser radiation is emitted from the pick-up lens.
Wavelength: 780 nm
Maximum output radiation power from pick-up: 100 μ W/VDE
Laser radiation from the pick-up lens is safety level, but be sure the followings:

1. **Do not disassemble the optical pick-up unit, since radiation from exposed laser diode is dangerous.**
2. **Do not adjust the variable resistor on the pick-up unit. It was already adjusted.**
3. **Do not look at the focus lens using optical instruments.**
4. **Recommend not to look at pick-up lens for a long time.**

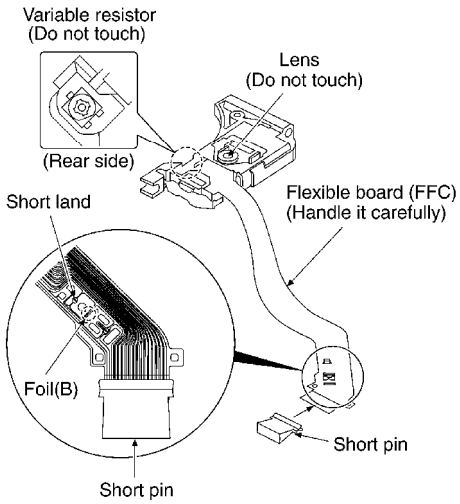
4. Handling Precautions for Traverse Deck

The laser diode in the traverse deck (optical pick-up) may break down due to potential difference caused by static electricity of clothes or human body.
So, be careful of electrostatic breakdown during repair of the traverse deck (optical pick-up).

4.1. Handling of traverse deck (optical pick-up)

1. **Do not subject the optical pick-up to static electricity as it is extremely sensitive to electrical shock.**
2. **To protect the laser diode against electrostatic breakdown, be sure that the short land of the flexible board (FFC board) should be short-circuit by solder before inserting a short pin or similar object into the tip of the flexible board. / (Referto Fig. 4-1.)**
3. **Take care not to apply excessive stress to the flexible board (FFC board).**
4. **Do not turn the variable resistor (laser power adjustment). It has already been adjusted. (Refer to Fig. 4-1.)**

Fig. 4-1.



4.2. Caution when replacing traverse deck

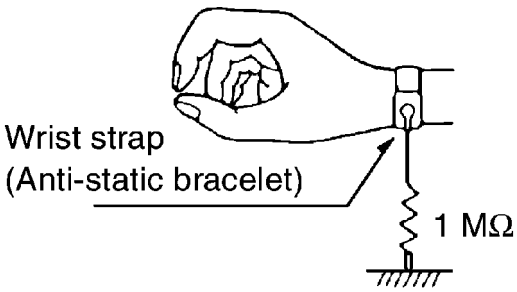
The traverse deck short-circuits the foil (B) to protect the laser diode against electrostatic breakdown. Be sure to cut the foil (B) before making connection. Take care not to make contact with cutting point each other. (Refer to Fig. 4-1.)

4.3. Grounding for electrostatic breakdown prevention

4.3.1. Human body grounding

Use the anti-static wrist strap to discharge the static electricity from your body. (Refer to Fig. 4-2.)

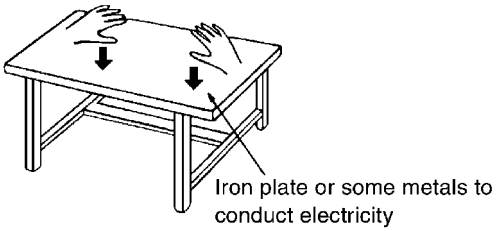
Fig. 4-2.



4.3.2. Work table grounding

Put a conductive material (sheet) or steel sheet on the area where the traverse deck (optical pick-up) is placed, and ground the sheet. (Refer to Fig. 4-3.)

Fig. 4-3.



Caution:

The static electricity of your clothes will not be grounded through the wrist strap.

So take care not to let your clothes touch the traverse deck (optical pick-up).

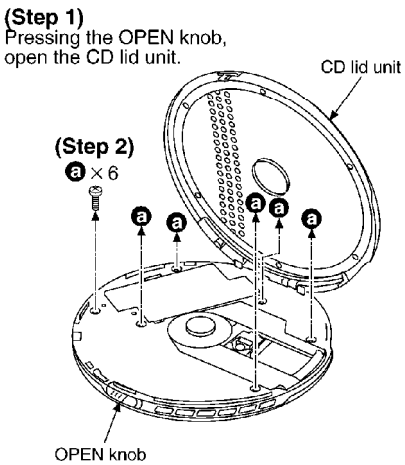
5. Operation Checks and Component Replacement / Procedures

- This section describes procedures for checking the operation of the major printed circuit boards and replacing the main components.

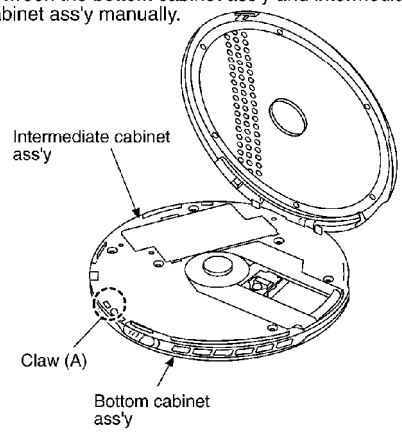
- For reassembly after operation checks or replacement, reverse the respective procedures. Special reassembly procedures are described only when required.

5.1. Checking for the main P.C.B.

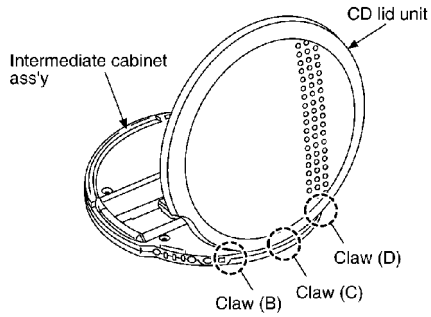
5.1.1. Checking for the main P.C.B. (A side)



(Step 3)
Release the claw (A), and then spread the clearance between the bottom cabinet ass'y and intermediate cabinet ass'y manually.

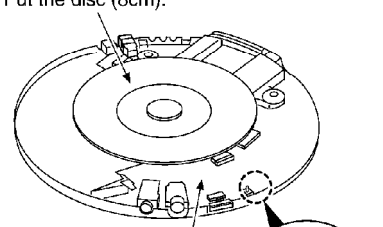


(Step 4)
Release the claw (B), (C) and (D), and then remove the intermediate cabinet ass'y and CD lid unit.

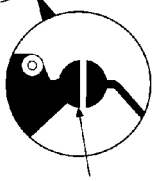


- Check the main P.C.B. (A side) as shown below.

(Step 6)
Put the disc (8cm).



(Step 5)
Short-circuit the land by soldering.



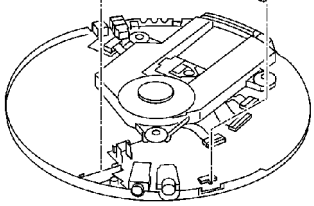
NOTE:
After checking, unsolder the short land to open circuit.

5.1.2. Checking for the main P.C.B. (B side)

- Follow the (Step 1) - (Step 5) of item 5.1.1.

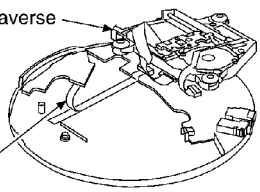
(Step 1)
Remove the rechargeable battery terminal (-).

(Step 2)
Remove the switch knob.

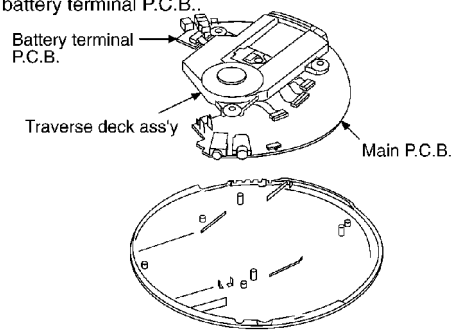


(Step 3)
Turn over the traverse deck ass'y.

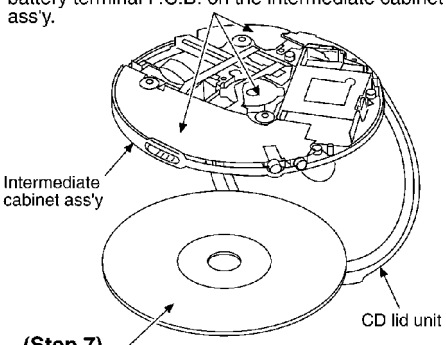
(Step 4)
Peel the FFC.



(Step 5)
Remove the traverse deck ass'y, main P.C.B. and battery terminal P.C.B..

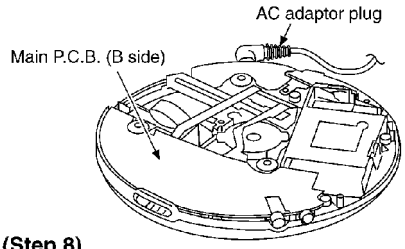


(Step 6)
Locate the traverse deck ass'y, main P.C.B. and battery terminal P.C.B. on the intermediate cabinet ass'y.



(Step 7)
Put the test disc, and then close the CD lid unit.

- Check the main P.C.B. (B side) as shown below.

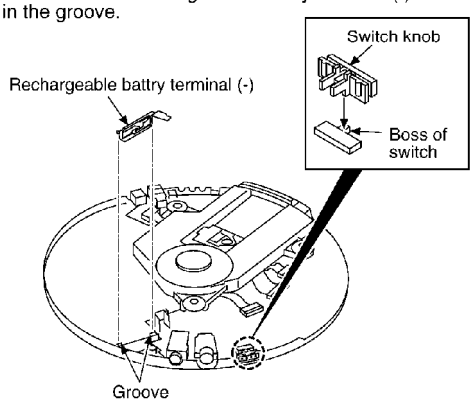


(Step 8)
Insert the AC adaptor plug into the DC IN jack, and then apply the power.

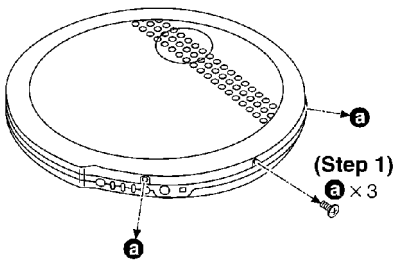
NOTE:
After checking, unsolder the short land to open circuit.

Notice for installation

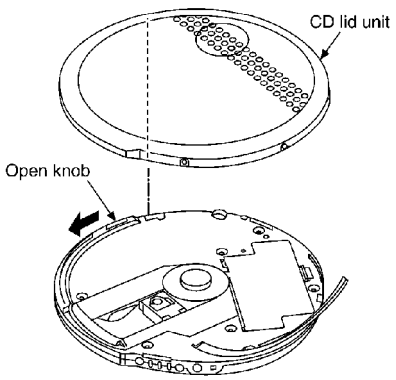
1. Make sure the boss of switch is fitted in the switch knob.
2. Make sure the rechargeable battery terminal (-) is fitted in the groove.

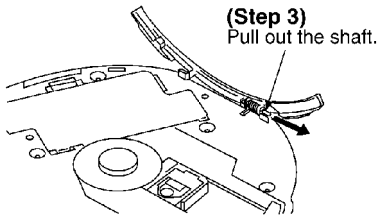


5.2. Replacement for the CD lid unit, shaft and axle hole board

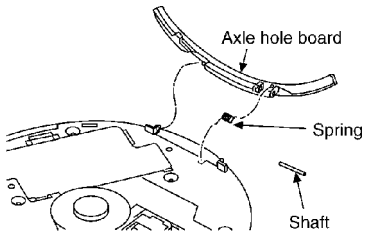


(Step 2)
Push the open knob, and then remove the CD lid unit.





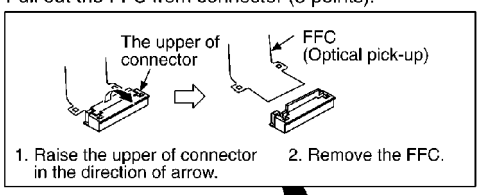
(Step 4)
Remove the shaft, axle hole board and spring.

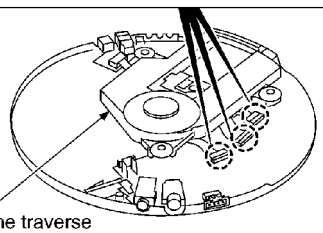


5.3. Replacement for the traverse motor and optical pick-up

- Follow the (Step 1) - (Step 4) of item 5.1.1.

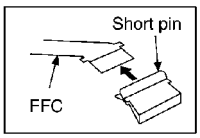
(Step 1)
Pull out the FFC from connector (3 points).



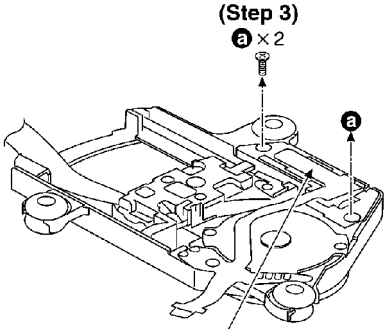


(Step 2)
Remove the traverse deck ass'y.

NOTE:
Insert a short pin into the traverse deck's FFC.
(Refer to "**Handling Precautions for Traverse Deck**".)

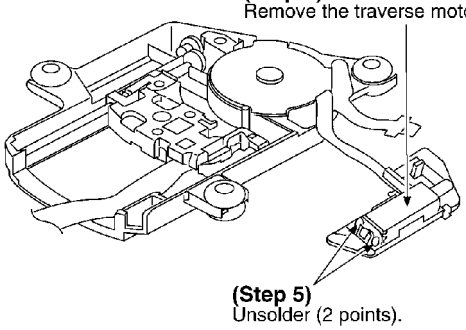


(Step 3)
ⓐ × 2



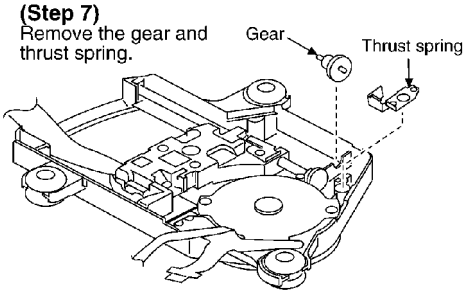
(Step 4)
Remove the holder and traverse motor.

(Step 6)
Remove the traverse motor.

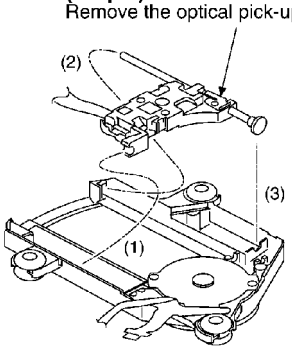


(Step 5)
Unsolder (2 points).

(Step 7)
Remove the gear and thrust spring.

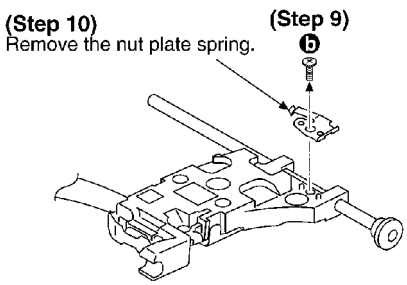


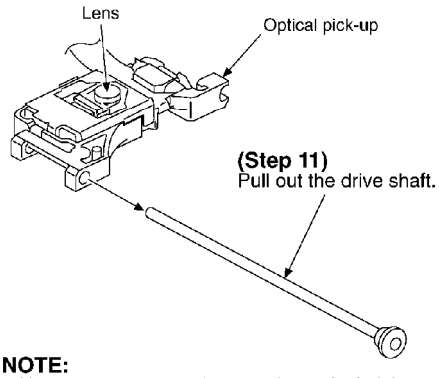
(Step 8)
Remove the optical pick-up ass'y.



(Step 10)
Remove the nut plate spring.

(Step 9)



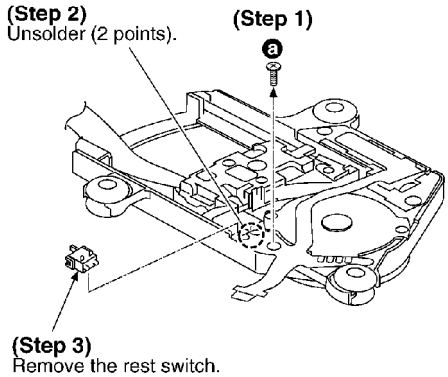


NOTE:
1. Use care to prevent damage the optical pick-up, due to the precision construction.
2. Do not apply the grease on the lens of optical pick-up.
3. Do not touch the lens of the optical pick-up.

5.4. Replacement for the rest switch

- Follow the (Step 1) - (Step 4) of item 5.1.1.

- Follow the (Step 1) , (Step 2) of item 5.3.



6. Display of Self-Diagnostic Function

This unit (SL-CT700) has self-diagnostic function. It may display below-mentioned on the remote control display.

- The substance of self-diagnostic display.

Remote control display

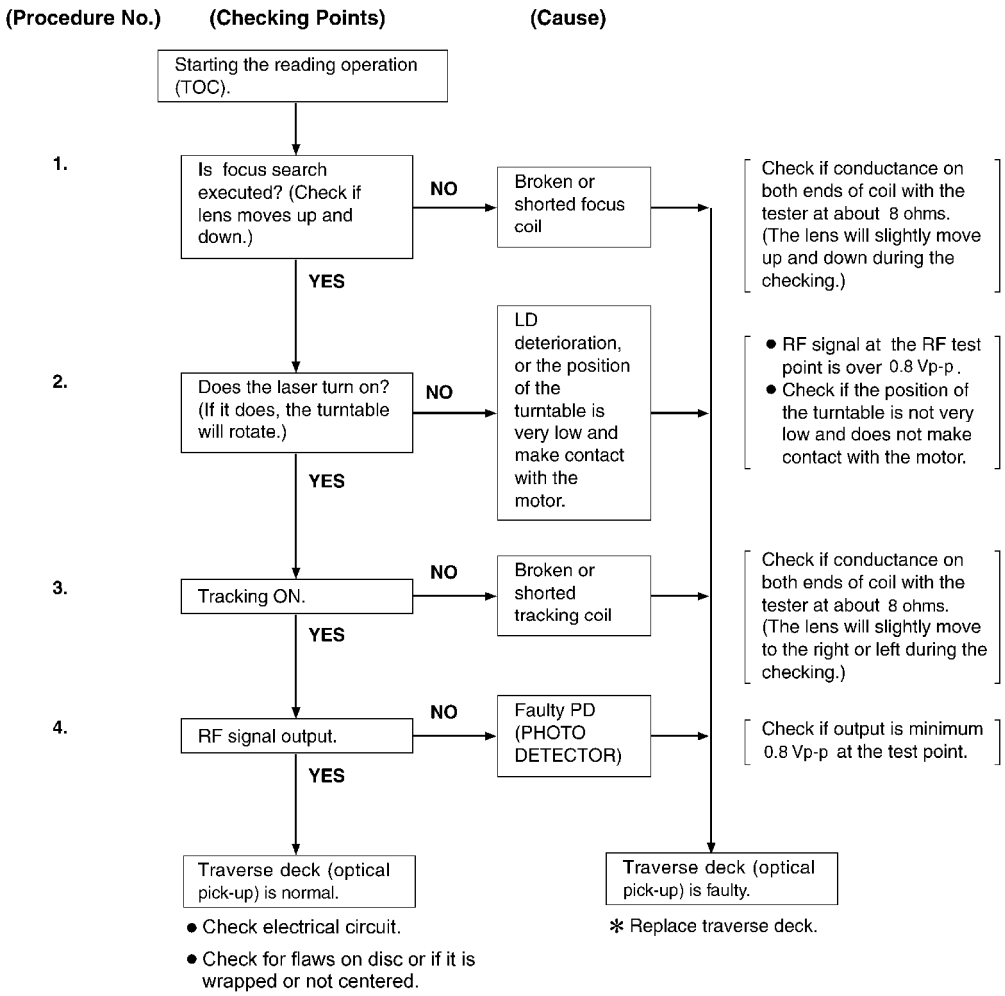
(Press PLAY and STOP button. After 15 seconds, it is displayed for 2 seconds.)

In case of this display, it may be causing for abnormally movements of traverse deck, touching failure of REST detect switch and coming off or cutting off the flexible P.C.B.. It is necessary for confirmation or repair and replacement each parts.

7. Checking the Operation Problems on the Traverse Deck (Optical Pick-up)

Make sure to follow the procedures below to check the operation problems of the traverse deck

(optical pick-up) before replacing it.
Replace the traverse deck only after the problem is identified.


(Procedure No.)
(Checking Points)
(Cause)
Starting the reading operation (TOC).
1.
Is focus search executed? (Check if lens moves up and down.)
NO
Broken or shorted focus coil
Check if conductance on both ends of coil with the tester at about 8 ohms. (The lens will slightly move up and down during the checking.)
YES
2.
Does the laser turn on? (If it does, the turntable will rotate.)
NO
LD deterioration, or the position of the turntable is very low and make contact with the motor.
● RF signal at the RF test point is over 0.8 Vp-p.
● Check if the position of the turntable is not very low and does not make contact with the motor.
YES
3.
Tracking ON.
NO
Broken or shorted tracking coil
Check if conductance on both ends of coil with the tester at about 8 ohms. (The lens will slightly move to the right or left during the checking.)
YES
4.
RF signal output.
NO
Faulty PD (PHOTO DETECTOR)
Check if output is minimum 0.8 Vp-p at the test point.
YES
Traverse deck (optical pick-up) is normal.
● Check electrical circuit.
● Check for flaws on disc or if it is wrapped or not centered.
Traverse deck (optical pick-up) is faulty.
✻ Replace traverse deck.

7.1. Check the operations described below on the traverse deck after replacing

7.1.1. Checking skip search

1. **Play an ordinary musical program disc.**
2. **Press the skip button to check for normal skip search operation (in both the forward and reverse directions).**

7.1.2. Checking manual search

1. **Play an ordinary musical program disc.**
2. **Press the manual search button to check for smooth manual search operation at either low or high speed (in both the forward and reverse directions).**

7.1.3. Checking playability

1. Play the 0.7 mm black dot and the 0.7 mm wedge on the playability test disc (SZZP1054C) and verify that no sound skip or noise occurs.
2. Play the middle tracks of the uneven test disc (SZZP1056C) and verify that no sound skip or noise occurs.

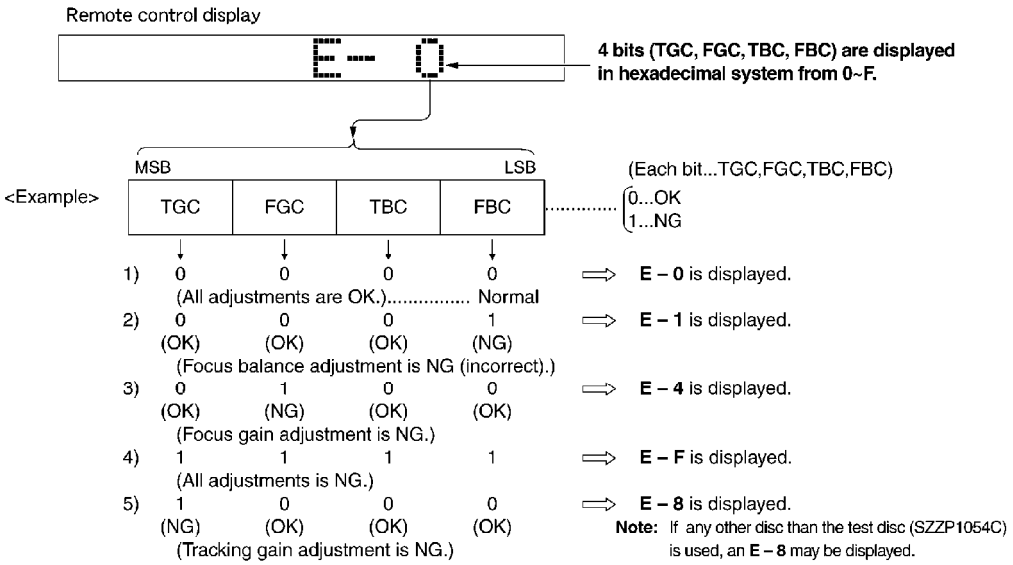
8. Automatic Adjustment Results Display Function / (Self-Check Function)

On the unit (SL-CT700), each automatic adjustment result are displayed on the remote control display. This function is convenient to check or identify which automatic adjustment circuit is incorrect.
The followings are the contents of the automatic adjustment result displays (Self-Check Function).

8.1. How to display automatic adjustment results

1. Load the test disc (SZZP1054C).
2. Press the ⏮ (SKIP/SEARCH) and ⏭ (SKIP/SEARCH) buttons simultaneously and hold them, and additionallypress the ⏯ (PLAY/PAUSE) button.
3. Press the ■ (STOP/OPR OFF) button once.
4. An automatic adjustment result is displayed on the remote control display.

8.2. Display of automatic adjustment results (Self-Check Function)


Remote control display
E- 0
4 bits (TGC, FGC, TBC, FBC) are displayed in hexadecimal system from 0~F.
MSB
LSB
(Each bit...TGC,FGC,TBC,FBC)
<Example>
TGC
FGC
TBC
FBC
0...OK
1...NG
1) 0 0 0 0 ⇒ E – 0 is displayed.
(All adjustments are OK.)..... Normal
2) 0 0 0 1 ⇒ E – 1 is displayed.
(OK) (OK) (OK) (NG)
(Focus balance adjustment is NG (incorrect).)
3) 0 1 0 0 ⇒ E – 4 is displayed.
(OK) (NG) (OK) (OK)
(Focus gain adjustment is NG.)
4) 1 1 1 1 ⇒ E – F is displayed.
(All adjustments is NG.)
5) 1 0 0 0 ⇒ E – 8 is displayed.
(NG) (OK) (OK) (OK)
(Tracking gain adjustment is NG.)
Note: If any other disc than the test disc (SZZP1054C) is used, an E – 8 may be displayed.

<Example>

Follow the below steps when E-1 is displayed.

(Cause: Focus balance (FBC) is set beyond the limit.)

- Check if

1. **the waveform or voltage of the focus servo circuit is correct, and**
2. **the optical pick-up returns to the normal state by exchanging the traverse deck.**

Follow the below steps when E-4 is displayed.

(Cause: Focus gain (FGC) is set beyond the limit.)

- Check if

1. **the waveform or voltage of the focus servo circuit is correct,**
2. **the focus coil of the optical pick-up is correct (around 8 ohms), and**
3. **the optical pick-up returns to the normal state by exchanging the traverse deck.**

Follow the below steps when E-F is displayed.

(Cause: All adjustments (TGC, FGC, TBC, FBC) are set beyond the limit.)

- Check if

1. **the optical pick-up returns to the normal state by exchanging the traverse deck, and**
2. **the waveform or voltage of the servo ICs are correct.**

Note:

It is not always necessary to exchange the traverse deck when an error message is displayed. Be sure to check if the circuit is defective or not before exchanging the traverse deck.

Note:

If any other disc than the test disc (SZZP1054C) is used, an error message may be displayed. This is not a malfunction.

9. Type Illustration of ICs, Transistors and Diodes

10. Schematic Diagram Notes

- This schematic diagram may be modified at any time with the development of new technology.

Notes:

S201:

Laser ON/OFF switch in ON position / (It turns ON with disc holder closed.)

S202:

Rest detector switch in OFF position / (It turns ON when optical pick-up comes to innermost periphery.)

S301:

Play/pause (▶ / ▮▮) switch

S302:

Stop/operation off (■) switch

S303:

R.skip/search (⏮) switch

S304:

Volume control switch (VOL+)

S305:

Volume control switch (VOL-)

S308:

F.skip/search (⏭) switch

S310:

Hold (HOLD) switch in OFF position

- Important safety notice:

Components identified by ⚠ mark have special characteristics important for safety.
Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used.
When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.

- The supply part number is described alone in the replacement parts list.

- Voltage and signal line

: Positive voltage line

: Playback signal line

- The voltage values and waveforms are the reference voltage of this measured by the DC electronic voltmeter (high impedance) and oscilloscope on the basis of GND terminal (DC IN jack).
Accordingly, there may arise some errors in the voltage valuesand waveforms depending upon the internal impedance of the tester or measuring unit.
Measurement conditions:

- AC adaptor is used for power supply.

- Set the hold switch to ON.

- The parenthesized is the voltage for test disc (1 kHz, L+R, 0 dB) in play mode, and the other, for no disc in stop mode.

Caution!

IC and LSI are sensitive to static electricity.
Secondary trouble can be prevented by taking care during repair.
Cover the parts boxes made of plastics with aluminum foil.
Ground the soldering iron.
Put a conductive mat on the work table.
Do not touch the legs of IC or LSI with the fingers directly.

11. Schematic Diagram

12. Printed Circuit Board and Wiring Connection Diagram

13. Block Diagram

14. Terminal Function of ICs

14.1. IC101(AN8885SBE1V): / Servo Amplifier

Pin No.	Terminal Name	I/O	Function
1	PDE	I	Tracking signal input (1) terminal
2	PDF	I	Tracking signal input (2) terminal
3	V_{DD}	I	Power supply terminal
4	PDA	I	Focus signal input (1) terminal
5	PDB	I	Focus signal input (2) terminal
6	LPD	-	Not used, open
7	LD	-	Not used, open
8	RF	O	RF addition output terminal
9	RF IN	I	RF detection signal input terminal
10	CSBRT	I	Connected to V_{DD} through capacitor
11	CEA	I	Connected to V_{DD} through capacitor
12	BDO	O	Dropout signal output terminal
13	LDON	I	Laser ON signal input terminal
14	GND	-	GND
15	/RFDET	O	RF detection signal output terminal
16	PDOWN	O	Reduced voltage detection signal output
17	OFTR	O	Off-track signal output terminal
18	DEFLVL	I	Laser intermittent drive ON/OFF input
19	ENV	O	RF envelope signal output terminal
20	GCTL	I	Input for CD-RW
21	EQSW	I	EQ characteristic drive signal input
22	TEIN	I	Tracking error amplifier input terminal
23	TEOUT	O	Tracking error amplifier output terminal

Pin No.	Terminal Name	I/O	Function
24	FEOUT	O	Focus error amplifier output terminal
25	FEIN	I	Focus error amplifier input terminal
26	VREF	O	Reference voltage output terminal
27	TBAL	I	Tracking balance signal input terminal
28	FBAL	I	Focus balance signal input terminal

14.2. IC301(C2BBGE000661): / System Control

Pin No.	Terminal Name	I/O	Function
1	REMKEY	I	Remote control key signal input
2	DOCTOR	I	Connected to power supply though resistor
3	VMONI / TOR2	I	Battery remaining measurement signal
4	VMONI / TOR1	I	Rechargeable battery voltage signal input
5	VMONI / TOR3	I	External battery remaining measurement signal
6	KEY2	I	Operation key signal input
7	KEY1		
8	OPEN	I	CD cover open detect signal input
9	CHARGE1	O	Charging ON signal output
10	BUZ	O	Buzzer control output terminal
11	FG	I	Pulse input terminal for spindle motor rotating measurement
12	DOT	O	Communication signal output for LCD driver/Remote control power off output
13	MUTELD	O	Laser intermittent drive ON/OFF output
14	ECS	O	EEPROM communication signal output
15	LED / CLOCK	O	Clock signal output for LED drive
16	PLAY	I	PLAY key signal input
17	MLD	O	Serial command latch output
18	MCLK	O	Serial command clock output/ EEPROM clock signal output

Pin No.	Terminal Name	I/O	Function
19	MDATA	O	Serial command data output/ EEPROM data signal input/output
20	STAT	I	Status signal input
21	BLKCK	I	Sub code block clock signal input
22	MUTEA/ / LDATA	O	Data signal output for LED drive
23	LD-OFF	O	LD current drive OFF signal output
24	TYPESEL	I	Not used, connected to GND via resistor
25	/RESET	I	Reset detect signal input
26	EXT-IN	I	Oscillator connected terminal (F= 32.7 kHz)
27	EXT-OUT	O	
28	XOSCIN	I	System clock signal
29	XOSCOUT	O	
30	Vss	-	GND
31	REST	I	Rest detect switch signal input
32	JACKM2	I	Line out connection detect signal input
33	JACKM1	I	Line out connection detect signal input
34	ICTRL	O	External battery current control output
35	LIMIT	-	Not used, open
36	TXPOWER	O	Optical output ON signal output
37	POWER	O	Power supply detect signal output
38	MUTEH	O	Headphone amp muting signal output
39	PDOWN	I	Headamp power OFF signal input
40	MUTEL	O	Line out muting signal output
41	PC2	O	Driver (3 ch) OFF signal output
42	PC1	O	Driver (1 ch) OFF signal output
43	RW	O	Output for CD-RW
44	JUDGE/ / XBS	O	Unit inspection OK/XBS ON signal output
45	X2	O	RF equalizer twice speed signal output
46	LED	O	LED for rechargeable battery signal output
47	X3SELCD	-	Not used, open
48	KANASEL	-	Not used, open

Pin No.	Terminal Name	I/O	Function
49	CHGSEL	-	Not used, open
50	PMSEL2	-	Not used, open
51	PMSEL	-	Not used, open
52	DUMMY	O	Dummy load signal output
53	X3SEL	-	Not used, open
54	TYPSEL3	-	Not used, open
55	TYPSEL2	-	Not used, connected to Vcc
56	A.S.SEL	-	Not used, connected to GND
57	ASHOCK	-	Not used, connected to GND
58	HOLD	I	HOLD switch signal input
59 | 70	SEG11 | SEG0	-	Not used, open
71	Vcc	I	Power supply terminal
72	VREF	I	Reference voltage input terminal
73	AVss	-	GND
74 | 77	COM3 | COM0	-	Not used, open
78	VL3	-	Not used, open
79	VL2	-	Not used, open
80	VL1	-	Not used, open

14.3. IC401(C0GBF0000017): / 4 ch Motor Drive

Pin No.	Terminal Name	I/O	Function
1	RF	-	Not used, connected to GND via resistor
2	COM	I	Motor coil midpoint signal input
3	VS	I	Power supply terminal
4	CP1	-	Charge pump capacitor connection
5	CPC1	-	Charge pump capacitor connection
6	CP2	-	Charge pump capacitor connection
7	CPC2	-	Charge pump capacitor connection
8	VG	-	Not used, connected to GND via capacitor
9	V_{CC}	I	Power supply terminal
10	FG	O	Pulse output terminal for spindle motor rotating measurement
11	FIL	-	Slope capacitor connection terminal
12	COMN	-	Slope capacitor connection terminal
13	S/S	I	Driver OFF signal input
14	PWM	I	Spindle motor drive signal input
15	BRK	I	Spindle motor drive signal input
16	MODE1	-	Connected to GND
17	MODE2	-	Connected to GND
18	NC	-	Not used, open
19	RMAX	-	Not used, connected to GND via resistor
20	VCOIM	-	Not used, connected to GND
21	VCO	-	Not used, connected to GND via capacitor
22	VGREG	-	Not used, connected to GND via capacitor
23	VSMON	I	A/D reference voltage input
24	TGND	-	GND
25	GND	-	GND
26	CLK	I	Clock signal input
27	IN3R	I	Traverse motor drive signal input
28	IN3F	I	Traverse motor drive signal input
29	IN2R	I	Tracking coil drive signal input
30	IN2F	I	Tracking coil drive signal input
31	IN1R	I	Focus coil drive signal input
32	IN1F	I	Focus coil drive signal input
33	VS3	I	Power supply terminal

33	VS3	I	Power supply terminal
Pin No.	Terminal Name	I/O	Function
34	MUTE	I	Driver OFF signal input
35	OUT3R	O	Traverse motor drive signal output
36	PGND3	-	GND
37	OUT3F	O	Traverse motor drive signal output
38	OUT2R	O	Tracking coil drive signal output
39	VS2	I	Power supply terminal
40	FGND2	-	GND
41	OUT2F	O	Tracking coil drive signal output
42	OUT1R	O	Focus coil drive signal output
43	FGND1	-	GND
44	VS1	I	Power supply terminal
45	OUT1F	O	Focus coil drive signal output
46	WOUT	O	Spindle motor drive signal output
47	VOUT	O	Spindle motor drive signal output
48	UOUT	O	Spindle motor drive signal output

14.4. IC501(MN6627911AC): / Servo Processor, Digital / Signal Processor, Digital Filter & D/A Converter

Pin No.	Terminal Name	I/O	Function
1	DRV_{DD}	I	Power supply terminal
2	D0	I/O	Data 0-1 input/output terminal
3	D1		
4	NWE	O	Write enable output terminal
5	NRAS	O	RAS control signal output terminal
6	D2	I/O	Data 2-3 input/output terminal
7	D3		
8	NCAS0	O	CAS control 0 signal output terminal
9	NCAS1	O	CAS control 1 signal output terminal
10 | 14	A8 | A4	O	Addresses 8-4 output terminal
15	A9	O	Address 9 output terminal
16 | 19	A0 | A3	O	Addresses 0-3 output terminal

Pin No.	Terminal Name	I/O	Function
20	V_{SS} 2	-	GND
21	DV_{DD} 2	I	Power supply terminal
22	SPOUT	O	Spindle motor drive output terminal
23	TRV+	O	Traverse motor drive (+) output terminal
24	TRV-	O	Traverse motor drive (-) output terminal
25	TR+	O	Tracking coil drive (+) output terminal
26	TR-	O	Tracking coil drive (-) output terminal
27	FO+	O	Focus coil drive (+) output terminal
28	FO-	O	Focus coil drive (-) output terminal
29	IOV_{DD} 1	I	Power supply terminal
30	TBAL	O	Tracking balance adjustment signal output
31	FBAL	O	Focus balance adjustment signal output
32	FE	I	Focus error signal input terminal
33	TE	I	Tracking error signal input terminal
34	RFENV	I	RF envelope signal input terminal
35	OFT	I	Off-track signal input terminal
36	NRFDET	I	RF detection signal input terminal
37	BDO	I	Dropout signal input terminal
38	LDON	O	Laser ON signal output terminal (H: ON)
39	ARF	I	RF signal input terminal
40	IREF	I	Reference current input terminal
41	AD PV_{CC}	O	A/D reference voltage output terminal
42	DSLF	O	Loop filter output terminal for DSL
43	RFSW	-	Not used, open
44	PLLF	O	Not used, connected to GND
45	PLLFO	O	Not used, connected to GND via capacitor
46	AV_{DD} 2	I	Power supply terminal
47	AV_{SS} 2	-	GND
48	OUTL	O	L ch audio signal output terminal

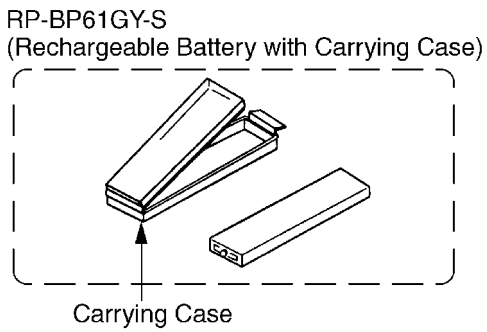
Pin No.	Terminal Name	I/O	Function
49	AV_{SS} 1	-	GND
50	OUTR	O	R ch audio signal output terminal
51	AV_{DD} 1	I	Power supply terminal
52	DV_{SS} 3	-	Not used, connected to GND
53	DV_{DD} 3	I	Power supply terminal
54	TMOD2	-	Not used, connected to GND
55	FLAG	-	Not used, open
56	EXT2	O	RF OFF signal output
57	EXT0	-	Not used, open
58	EXT1	O	Laser power drive clock signal output
59	IOV_{DD} 2	I	Power supply terminal
60	TX	O	Digital audio interface signal output
61	MCLK	I	Serial command clock input
62	MDATA	I	Serial command data input
63	MLD	I	Serial command latch input
64	BLKCK	O	Sub-code block clock signal output
65	PWMSEL	-	Connected to GND
66	SMCK	O	System clock signal output
67	SBCK	-	Not used, connected to GND
68	STAT	O	Status signal output terminal
69	NRST	I	Reset signal input terminal
70	SPPOL	O	Spindle motor drive signal output terminal
71	PMCK	-	Not used, open
72	DQSY	-	Not used, open
73	TXTD	-	Not used, open
74	TXTCK	-	Not used, open
75	NTEST	I	Test terminal (Connected to power supply)
76	X2	O	Crystal oscillator connected (F= 16.9 MHz)
77	X1	I	
78	DV_{SS} 1	-	GND
79	DV_{DD} 1	I	Power supply terminal
80	NC	-	Not used, open

15. Supply of Rechargeable Battery as Replacement Parts

Please take note of the following points relating to Carrying Case to be used for protection of Rechargeable Battery from shorting.

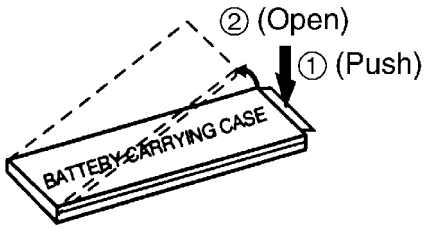
Replacement Parts:

- **Rechargeable Battery (RP-BP61GY-S) to be supplied will be provided with Carrying Case.**
- **The rechargeable batteries for accessories are contained a pair of two batteries, however, for replacement parts, that is supplied one by one.**
- **No replacement parts will be supplied for Rechargeable Battery without Carrying Case.**
- **Replacement parts will be supplied for Carrying Case (RFC0062-X) without Rechargeable Battery.**
- **To your customers, delivery Rechargeable Battery together with Carrying Case to prevent shorting accidents that may occur when Rechargeable Battery is carried about without Carrying Case.**



16. Caution in use of Rechargeable Battery

- **Take Rechargeable Battery out of Carrying Case and use it.**
- **Be sure to carry Rechargeable Battery in this Carrying Case. / If not, may either heat or ignite by shorting with a metal.**



17. Replacement Parts List

Notes:

- **Important safety notice:**
  Components identified by ⚠ mark have special characteristics important for safety.
  Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors),

etc. are used.
When replacing any of components, be sure to use only manufactures specified parts shown in the parts list.

- The parenthesized indications in Remarks columns specify the areas and colours.
  (GDA): SL-CT700GD, Blue Type
  (GDR): SL-CT700GD, Red Type
  (GDS): SL-CT700GD, Silver Type
  (GDW): SL-CT700GD, White Type
  (GKA): SL-CT700GK, Blue Type
  (GKR): SL-CT700GK, Red Type
  (GKS): SL-CT700GK, Silver Type
  (GKW): SL-CT700GK, White Type
- The marking [RTL] indicates that retention time is limited for this item. After the discontinuation of this assembly in production, it will no longer be available.
- All parts are supplied by MESA.

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
1	RAE0223Z-M	TRAVERSE DECK UNIT	1	⚠
1-1	RMG0503-K1	FLOATING RUBBER	3	
1-2	RXQ0798	MOTOR ASS'Y	1	
1-3	RAF0223A	OPTICAL PICK-UP	1	⚠
1-4	RDG0554	GEAR 1	1	
1-5	RDG0555	GEAR 2	1	
1-6	RHD14092-K	SCREW	1	
1-7	RJB2447A-1	FFC	1	
1-8	RMC0451-1	SPRING PLATE	1	
1-9	RMC0452	SPRING	1	
1-10	RMS0782	SHAFT 1	1	
1-11	XQN17+BG45	SCREW	3	
2	REZ1494	WIRE ASS'Y	1	
3	RGK1589-S	BOTTOM CABINET / ORNAMENT	1	(GKS/GDS)
3	RGK1589-A	BOTTOM CABINET / ORNAMENT	1	(GKA/GDA)
3	RGK1589-R	BOTTOM CABINET / ORNAMENT	1	(GKR/GDR)
3	RGK1589-W	BOTTOM CABINET / ORNAMENT	1	(GKW/GDW)
4	RGV0308-S	KNOB,HOLD	1	(GKS/GKA/ / GKW/GDA/ / GDS /GDW)
4	RGV0308-R	KNOB,HOLD	1	(GKR/GDR)
5	RJC99048	BATTERY TERMINAL(-)	1	
6	XTN17+6GTZ	SCREW	6	
7	RYK1264D-S	BOTTOM CABINET	1	(GKS/GDS)
7	RYK1264D-A	BOTTOM CABINET	1	(GKA/GDA)

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
7	RYK1264D-R	BOTTOM CABINET	1	(GKR/GDR)
7	RYK1264D-W	BOTTOM CABINET	1	(GKW/GDW)
8	RHD14101-S	SCREW	3	
9	RYF0658-S	CD LID UNIT	1	(GKS/GDS)
9	RYF0658-A	CD LID UNIT	1	(GKA/GDA)
9	RYF0658-R	CD LID UNIT	1	(GKR/GDR)
9	RYF0658-W	CD LID UNIT	1	(GKW/GDW)
9-1	RGD0092-S	LID ORNAMENT	1	(GKS/GDS)
9-1	RGD0092-A	LID ORNAMENT	1	(GKA/GDA)
9-1	RGD0092-R1	LID ORNAMENT	1	(GKR/GDR)
9-1	RGD0092-W	LID ORNAMENT	1	(GKW/GDW)
9-2	RHQ0088-K	SCREW	6	
10	RGU2170-W	BUTTON,PLAY/PAUSE	1	
11	RGV0313-S	KNOB,OPEN	1	
12	RHE5119YA	SCREW	4	
13	RJC99047-1	BATTERY TERMINAL	1	
14	RKK0155A-W	BATTERY LID	1	(GKS/GDS)
14	RKK0155A-1A	BATTERY LID	1	(GKA/GDA)
14	RKK0155A-N	BATTERY LID	1	(GKR/GDR)
14	RKK0155A-A	BATTERY LID	1	(GKW/GDW)
15	RMA1621	PLATE	1	
16	RMB0739	SPRING	1	
17	RMC0535	SPRING	1	
18	RMQ1164	AXLE HOLE BOARD	1	
19	RMR1488-K	LOCK PLATE	1	
20	RMS0797	SHAFT	1	
21	RYK1263B-W2	MIDDLE CABINET	1	(GKS/GDS)
21	RYK1263B-1A1	MIDDLE CABINET	1	(GKA/GDA)
21	RYK1263B-N1	MIDDLE CABINET	1	(GKR/GDR)
21	RYK1263B-A1	MIDDLE CABINET	1	(GKW/GDW)
22	RGN2366-H1	NAME PLATE	1	(GKS/GKA/ / GKR/GKW)
22	RGN2361-H	NAME PLATE	1	(GDS/GDA/ / GDR/GDW)
23	RQLS0244	CAUTION LABEL	1	(GKS/GKA/ / GKR/GKW)
A1	RP-BP61GY-S	RECHARGEABLE BATT. / ASS'Y	2	
A2	L0BAB0000170	STEREO EARPHONES	1	
A3	N0JCCE000001	AC ADAPTOR	1	⚠ / (GKS/GKA/ / GKR/GKW)
A3	N0JCCE000005	AC ADAPTOR	1	⚠ / (GDS/GDA/ / GDR/GDW)
A4	N2QCBD000028	WIRED REMOTE / CONTROL	1	
A4-1	RFKY0019	TOP COVER ASS'Y	1	
A4-2	RFKY0004	BOTTOM COVER ASS'Y	1	
A5	RFA1821-H	EXTERNAL BATTERY / CASE	1	
A6	RFC0062-X	BATTERY CARRYING / CASE	1	
A7	RFC0071-H	SOFT CASE	1	
A8	RQT6660-K	OPERATING / INSTRUCTIONS	1	(GKS/GKA/ / GKR/GKW), / CHINESE
A8	RQT6664-B	OPERATING / INSTRUCTIONS	1	(GKS/GKA/ / GKR/GKW), / ENGLISH
A8	RQT6906-Z	OPERATING / INSTRUCTIONS	1	(GDS/GDA/ / GDR/GDW), / KOREAN
A10	RQCB1205-1	SERVICE CENTER / LISTS	1	(GKS/GKA/ / GKR/GKW)
C1	ECJ0EB1H332K	50V 3300P	1	
C2	ECJ1VF1A105Z	10V 1U	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C11	ECUV1H101KCV	50V 100P	1	ECJ1VC1H101K
C12	ECST0JY226R	6.3V 22U	1	
C13	F3H1A476A001	16V 47U	1	
C14	F3G0G1070001	4V 100U	1	
C15	ECUENA104KBQ	10V 0.1U	1	F1G1A104A014
C16	RCST0GY476RG	4V 47U	1	F3F0G4760001
C17	RCST1CC476RG	16V 47U	1	F3H1C4760008
C21	ECJ0EB1H101K	50V 100P	1	
C41,42	F3H1A227A011	10V 220U	2	
C54	F1H1C104A056	16V 0.1U	1	
C61	ECUV1H101KCV	50V 100P	1	ECJ1VC1H101K
C62	RCSX0GY226RE	4V 22U	1	F3F0G226A001
C71	ECST0JY106R	6.3V 10U	1	
C72	F1H1C104A056	16V 0.1U	1	
C101	ECUENA104KBQ	10V 0.1U	1	F1G1A104A014
C103	ECJ0EB1C223K	16V 0.022U	1	
C111	ECJ0EB1C223K	16V 0.022U	1	
C112	F1G1H221A416	50V 220P	1	
C113,14	ECUENA104KBQ	10V 0.1U	2	F1G1A104A014
C115-17	ECJ0EB1C223K	16V 0.022U	3	
C118	F3G0G1070001	4V 100U	1	
C120	ECUE1H152KBQ	50V 1500P	1	ECJ0EB1H152K
C121	ECUE1E121KBQ	25V 120P	1	
C131,32	ECJ0EB1H271K	50V 270P	2	
C201	ECST0JY226R	6.3V 22U	1	
C205	ECUENA104KBQ	10V 0.1U	1	F1G1A104A014
C206	ECJ0EB1C103K	16V 0.01U	1	
C207	ECUVNJ475MBN	6.3V 4.7U	1	F1J0J4750002
C301,02	ECJ1VF1A105Z	10V 1U	2	
C303,04	ECUV1H101KCV	50V 100P	2	ECJ1VC1H101K
C398,99	ECJ0EC1H120J	50V 12P	2	
C401-03	F1H1C104A056	16V 0.1U	3	
C404	F1H1A105A025	10V 1U	1	
C405	F1H1H472A219	50V 4700P	1	
C406	ECST0JY226R	6.3V 22U	1	
C407	ECUVNA224KBV	10V 0.22U	1	F1H1A224A028
C412	F1H1C104A056	16V 0.1U	1	
C431	ECJ1VB1H222K	50V 2200P	1	
C437	ECJ1VF1A105Z	10V 1U	1	
C501	ECJ0EC1H120J	50V 12P	1	
C503	ECUV1H391KBV	50V 390P	1	ECJ1VB1H391K
C504	F1H1C104A056	16V 0.1U	1	
C505	ECUVNH103KBV	50V 0.01U	1	F1H1H103A748
C507	F3G0G1070001	4V 100U	1	
C509-11	F1H1C104A056	16V 0.1U	3	
C514	ECJ1VB1H102K	50V 1000P	1	
C515,16	F1H1C104A056	16V 0.1U	2	
C517,18	ECJ1VF1A105Z	10V 1U	2	
C519	ECUV1H470KCV	50V 47P	1	F1H1H470A720
C522	ECJ0EC1H120J	50V 12P	1	
C525	F1H1A105A025	10V 1U	1	
C551,52	ECUENA104KBQ	10V 0.1U	2	F1G1A104A014
C603,04	ECUE1E682KBQ	25V 6800P	2	ECJ0EB1E682K
C605,06	F3E0G106A001	4V 10U	2	

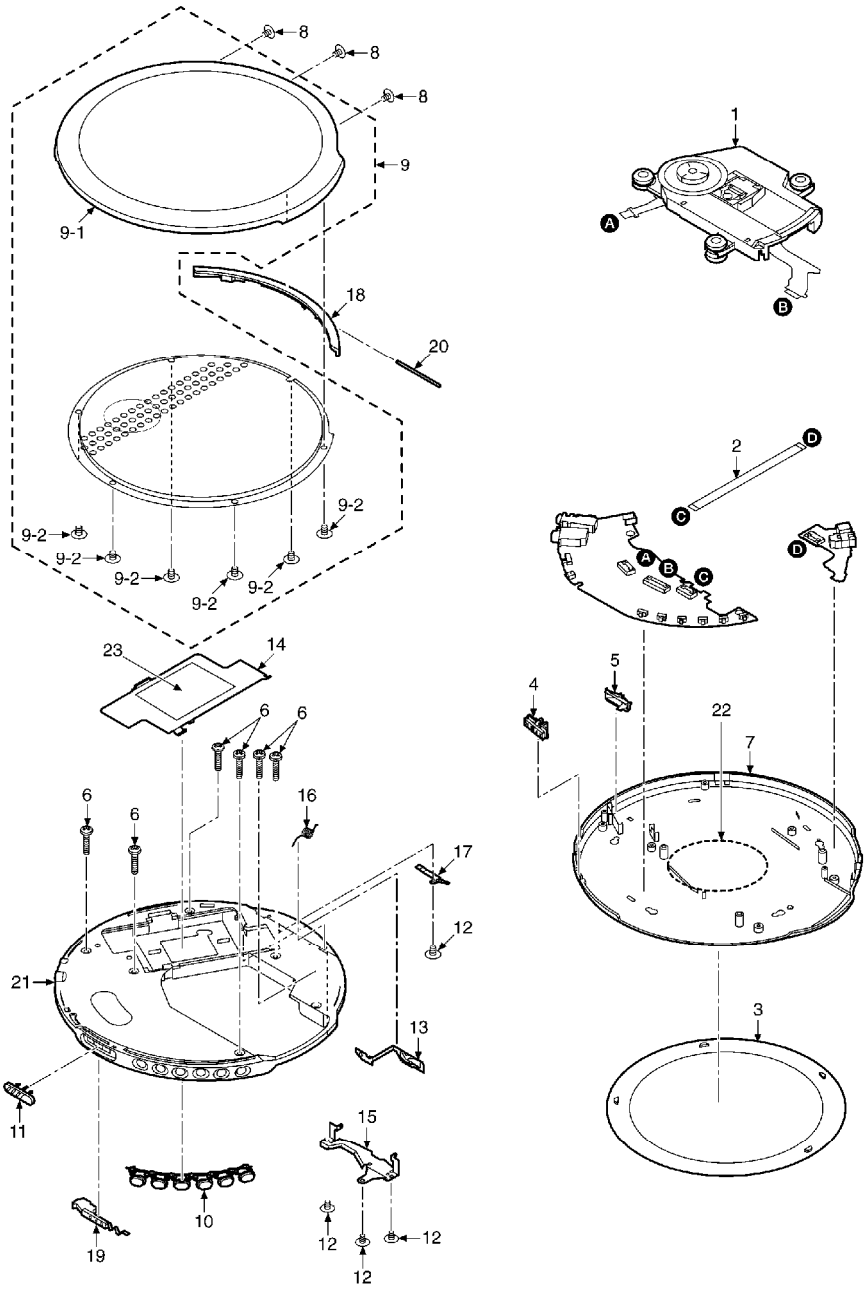
Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C607,08	ECJ0EB1H681K	50V 680P	2	
C610	RCST0GY476RG	4V 47U	1	F3F0G4760001
C611	F1H1C104A056	16V 0.1U	1	
C612	RCSX0GY226RE	4V 22U	1	F3F0G226A001
C613,14	F1G1H222A416	50V 2200P	2	
C651	ECUENA104KBQ	10V 0.1U	1	F1G1A104A014
C702	ECUVNA224KBV	10V 0.22U	1	F1H1A224A028
C704	F1H1C104A056	16V 0.1U	1	
C705,06	F3G0E1570001	2.5V 150U	2	
C708	F1H1C104A056	16V 0.1U	1	
C710	F1H1C104A056	16V 0.1U	1	
C711,12	ECUVNA224KBV	10V 0.22U	2	F1H1A224A028
C714,15	ECUVNJ475MBN	6.3V 4.7U	2	F1J0J4750002
C716	F3E0G106A001	4V 10U	1	
C717	ECJ1VF1A105Z	10V 1U	1	
C718	ECUVNA224KBV	10V 0.22U	1	F1H1A224A028
C719	F1H1C104A056	16V 0.1U	1	
C731	ECJ1VB1H102K	50V 1000P	1	
C806,07	ECJ1VF1A105Z	10V 1U	2	
CN11	RJC99042-1	BATT.TERMINAL	1	
CN13	K1MN08B00063	CONNECTOR(8P)	1	
CN16	K1MN08B00063	CONNECTOR(8P)	1	
CN101	RJS2A4616T	CONNECTOR(16P)	1	K1MN16B00063
CN401	K1MN08B00063	CONNECTOR(8P)	1	
CX721	ECJ1VF1A105Z	10V 1U	1	
D2	MA2J11100L	DIODE	1	
D11	B0JCMC000006	DIODE	1	
D12	MA1070400L	DIODE	1	MA2J70400L
D21	MA2J72900L	DIODE	1	
D41	MA1070400L	DIODE	1	MA2J70400L
D61	MA2J72900L	DIODE	1	
D71	MA2J72900L	DIODE	1	
D101	MA2J11100L	DIODE	1	
D361	B3AGB0000037	DIODE	1	
D368-72	SML-310MT	LED	5	B3ABB0000091
D501	SB00703QTL	DIODE	1	B0JCBD000002
D601	MA2J11100L	DIODE	1	
IC11	C0EBD0000164	IC	1	
IC12	C0CBAFD00002	IC	1	
IC41	C0CBZBZ00001	IC	1	
IC61	C0DBAFB00014	IC	1	
IC71	C0CBZBZ00002	IC	1	
IC81	C0EBD0000164	IC	1	
IC91	C0CBZAZ00001	IC	1	
IC92	C0DBAFA00021	IC	1	
IC101	AN8885SBE1V	IC	1	
IC201	C1BB00000695	IC	1	
IC301	C2BBGE000661	IC	1	
IC302	AK93C45BH-L	IC	1	C3EBCG000028
IC303	C1BB00000736	IC	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
IC401	C0GBF0000017	IC	1	
IC501	MN6627911AC	IC	1	
IC502	C3ABMB000033	IC	1	
IC701	C1BB00000516	IC	1	
ICP11	K5H1522A0018	IC PROTECTOR	1	⚠
ICP41	ERY32SB075VA	IC PROTECTOR	1	⚠
JK11	K2FB3B000003	JK,DC IN	1	
JK12	K2FB2B000003	JK,EXT BATT.	1	
JK601	B3FAZ0000068	JK,OPTICAL DIGITAL	1	
JK701	K2HC106B0008	JK,HEADPHONE	1	
L11	G1C101MA0035	COIL	1	
L12	RLQU101KT-W	COIL	1	G1C101K00008
L21	G1C330MA0035	COIL	1	
L61	RLQU101KT-W	COIL	1	G1C101K00008
L71	RLQU331KT-W	COIL	1	G1C331K00004
P1	RPF0111-2	PROTECTION BAG	1	
P2	RPK1846	GIFT BOX	1	(GKS)
P2	RPK1849	GIFT BOX	1	(GKA)
P2	RPK1847	GIFT BOX	1	(GKR)
P2	RPK1848	GIFT BOX	1	(GKW)
P2	RPK1836	GIFT BOX	1	(GDS)
P2	RPK1839	GIFT BOX	1	(GDA)
P2	RPK1837	GIFT BOX	1	(GDR)
P2	RPK1838	GIFT BOX	1	(GDW)
P3	RPQ1420	PAD1	1	
P4	RPQ1453	PAD2	1	
P5	RMQ1192-1	DISC SPACER	1	(GKA/GKW/ / GDA/GDW)
PCB1	REP3428J-M	PCB ASS'Y	1	[RTL]
Q11	DTC114YUA106	TRANSISTOR	1	B1GBCFJN0009
Q12	B1CFNC000001	TRANSISTOR	1	
Q13	B1DFDC000003	TRANSISTOR	1	
Q21	B1CHMC000001	TRANSISTOR	1	
Q41	2SB1182TLPQR	TRANSISTOR	1	B1BDND000001
Q42	B1ABMD000004	TRANSISTOR	1	
Q61	B1CHMC000001	TRANSISTOR	1	
Q81	2SD1819A0L	TRANSISTOR	1	
Q101	B1CDGD000001	TRANSISTOR	1	
Q301	B1CDGD000001	TRANSISTOR	1	
Q302,03	B1GDCFJN0011	TRANSISTOR	2	
Q361,62	UN521MTX	TRANSISTOR	2	UNR521M00L
Q501	B1CHMC000001	TRANSISTOR	1	
Q502	B1CFHA000001	TRANSISTOR	1	
Q551	DTA143EUA106	TRANSISTOR	1	B1GDCFGG0005
Q601	XN0F26100L	TRANSISTOR	1	
Q604	2SB1218A	TRANSISTOR	1	
Q605	XP1501TW	TRANSISTOR	1	XP0150100L
Q701	XN0F26100L	TRANSISTOR	1	

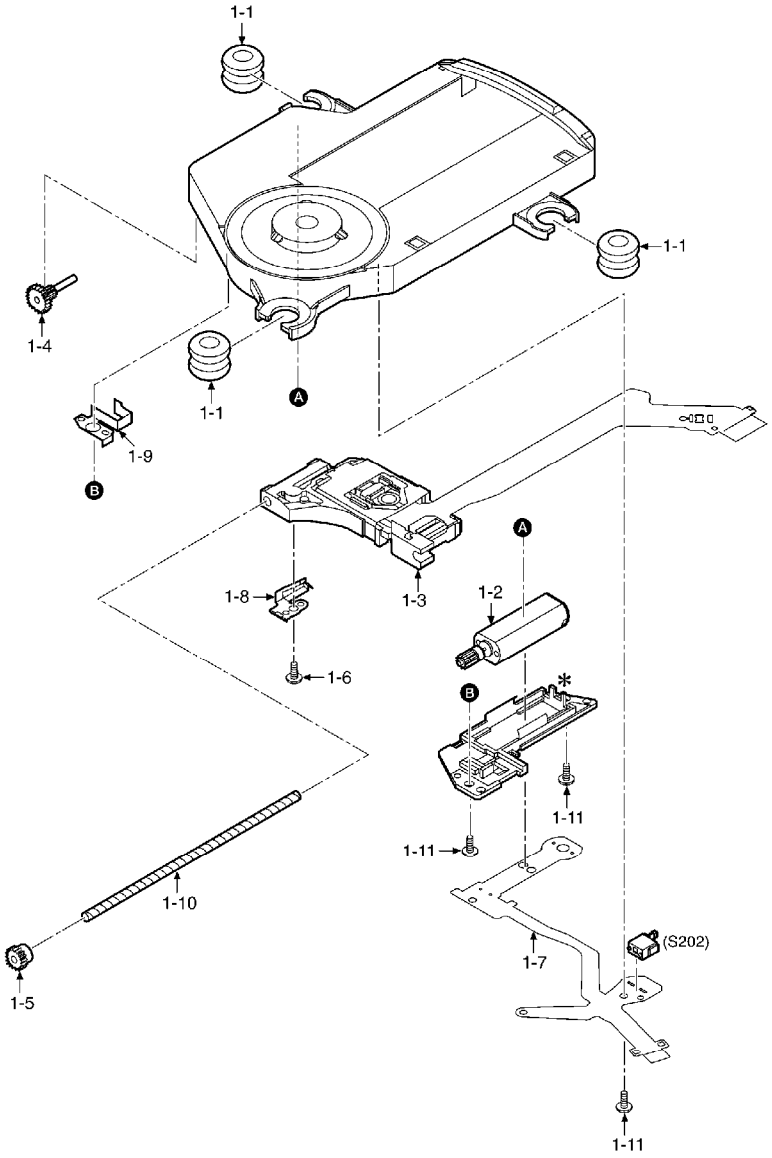
Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
Q901	B1GDCFJN0011	TRANSISTOR	1	
Q903	B1GDCFNN0007	TRANSISTOR	1	
R3,R4	D0YBR0000010	RESISTOR	2	
R13	ERJ2GEJ105	1/4W 1M	1	D0GA105JA001
R14	ERJ2GEJ104	1/4W 100K	1	
R15	ERJ2GEJ101	1/4W 100	1	
R44	ERJ3GEYJ271V	1/16W 270	1	
R45	ERJ3GEYJ104	1/16W 100K	1	
R50,51	ERJ8GEYJ2R2V	1/8W 2.2	2	
R52	ERJ3GEYJ105V	1/16W 1M	1	
R53	ERJ3GEYJ104	1/16W 100K	1	
R55,56	ERJ3GEYJ104	1/16W 100K	2	
R57	ERJ3GEYJ102V	1/16W 1K	1	
R58	ERJ3RBD563	1/16W 56K	1	ERJ3RBD563V
R59	ERJ3RBD683V	1/16W 68K	1	
R60	ERJ3GEYJ103V	1/16W 10K	1	D0GB103JA002
R81	ERJ3GEYJ472V	1/16W 4.7K	1	
R82,83	ERJ3GEYJ123V	1/16W 12K	2	
R92	ERJ3GEY0R00V	CHIP JUMPER	1	
R101	EXBV4V101JV	1/32W 100	1	
R120	ERJ2GEJ103	1/4W 10K	1	
R121,22	ERJ2GEJ124	1/4W 120K	2	
R125	EXBV4V124JV	1/32W 120K	1	
R126	ERJ2GEJ104	1/4W 100K	1	
R128	EXBV4V103JV	1/32W 10K	1	
R129	ERJ2GEJ104	1/4W 100K	1	
R202	ERJ2GEJ223X	1/4W 22K	1	ERJ2RMJ223X
R204	ERJ2GEJ102X	1/4W 1K	1	ERJ2RMJ102X
R205	ERJ2GEJ682X	1/4W 6.8K	1	ERJ2RMJ682X
R206	ERJ2GEJ153	1/4W 15K	1	
R207	ERJ2GE0R00X	1/4W 0	1	D0YAR0000003
R301	ERJ3GEYJ472V	1/16W 4.7K	1	
R302	ERJ3GEYJ104	1/16W 100K	1	
R303	ERJ2GEJ102X	1/4W 1K	1	ERJ2RMJ102X
R304	ERJ3GEYJ105V	1/16W 1M	1	
R305	ERJ2GEJ335	1/4W 3.3M	1	
R307	ERJ2GEJ104	1/4W 100K	1	
R308	ERJ2GEJ822X	1/4W 8.2K	1	ERJ2RMJ822X
R309	ERJ2GEJ104	1/4W 100K	1	
R310	ERJ3GEYJ102V	1/16W 1K	1	
R311	EXBV4V102JV	1/32W 1K	1	
R312	ERJ2GEJ273X	1/4W 27K	1	ERJ2RMJ273X
R314	ERJ2GEJ393X	1/4W 39K	1	ERJ2RMJ393X
R316	ERJ3GEYJ102V	1/16W 1K	1	
R324	ERJ3RBD273V	1/16W 27K	1	
R325	ERJ3GEYJ333V	1/16W 33K	1	D0GB333JA002
R326	ERJ3GEYJ102V	1/16W 1K	1	
R331,32	ERJ3GEYJ103V	1/16W 10K	2	D0GB103JA002
R341	ERJ3GEYJ104	1/16W 100K	1	
R342	ERJ2GEJ102X	1/4W 1K	1	ERJ2RMJ102X
R350,51	ERJ3GEYJ104	1/16W 100K	2	
R353	ERJ3GEYJ104	1/16W 100K	1	
R359	ERJ2GEJ103	1/4W 10K	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R363	EXBV8V560JV	1/16W 56	1	
R364	EXBV4V560J	1/32W 56	1	
R365	ERJ2GEJ331X	1/4W 330	1	ERJ2RMJ331X
R366	ERJ2GEJ390X	1/4W 39	1	ERJ2RMJ390X
R397	EXBV8V104JV	1/16W 100K	1	
R401	ERJ3GEYJ472V	1/16W 4.7K	1	
R404	ERJ2GE0R00X	1/4W 0	1	D0YAR0000003
R405	ERJ3GEYJ473V	1/16W 47K	1	D0GB473JA002
R410,11	ERJ3GEYJ335V	1/16W 3.3M	2	
R502	ERJ3GEYJ683V	1/16W 68K	1	D0GB683JA002
R507	MCR03PZHJ561	1/16W 560	1	
R508	ERJ3GEYJ100	1/16W 10	1	
R509	ERJ2GEJ331X	1/4W 330	1	ERJ2RMJ331X
R511	ERJ3GEYJ102V	1/16W 1K	1	
R512	EXBV4V102JV	1/32W 1K	1	
R514	ERJ3GEYJ681V	1/16W 680	1	D0GB681JA002
R515	ERJ3GEYJ150V	1/16W 15	1	
R516	ERJ3GEYJ104	1/16W 100K	1	
R518	ERJ2GEJ473X	1/4W 47K	1	ERJ2RMJ473X
R551	ERJ2GEJ102X	1/4W 1K	1	ERJ2RMJ102X
R603,04	EXBV4V271JV	1/16W 270	2	
R605	EXBV4V473JV	1/32W 47K	1	
R607	EXBV4V102JV	1/32W 1K	1	
R611,12	ERJ3GEYJ682V	1/16W 6.8K	2	D0GB682JA002
R613	ERJ3GEYJ222V	1/16W 2.2K	1	
R614	ERJ3GEYJ224V	1/16W 220K	1	D0GB224JA002
R615	ERJ3GEYJ103V	1/16W 10K	1	D0GB103JA002
R701,02	ERJ2GEJ100	1/4W 10	2	
R703,04	ERJ3GEYJ1R5V	1/16W 1.5	2	
R707,08	ERJ2GEJ102X	1/4W 1K	2	ERJ2RMJ102X
R709,10	ERJ3GEYJ104	1/16W 100K	2	
R711	ERJ3GEYJ102V	1/16W 1K	1	
R712	ERJ3GEYJ104	1/16W 100K	1	
R720	ERJ3GEYJ223V	1/16W 22K	1	D0GB223JA002
R750	EXBV4V183JV	1/32W 18K	1	
R751	EXBV4V562JV	1/32W 5.6K	1	
RJ11	ERJ2GE0R00X	1/4W 0	1	D0YAR0000003
RJ402	ERJ2GE0R00X	1/4W 0	1	D0YAR0000003
RJ501	ERJ2GE0R00X	1/4W 0	1	D0YAR0000003
RJ503	ERJ2GE0R00X	1/4W 0	1	D0YAR0000003
RX721	ERJ2GEJ103	1/4W 10K	1	
S201	RSH1A039-A	SW,LASER ON/OFF	1	K0L1BA000037
S202	RSP1A024-A	SW,REST DET.	1	K0L1BA000029
S301-05	K0H1BB000060	SW,OPERATION	5	
S308	K0H1BB000060	SW,OPERATION	1	
S310	RSS2A010-1A	SW,HOLD	1	K0D112B00071
X301	H0J327200034	OSCILLATOR	1	
X501	H0J169300002	OSCILLATOR	1	

18. Cabinet Parts Location

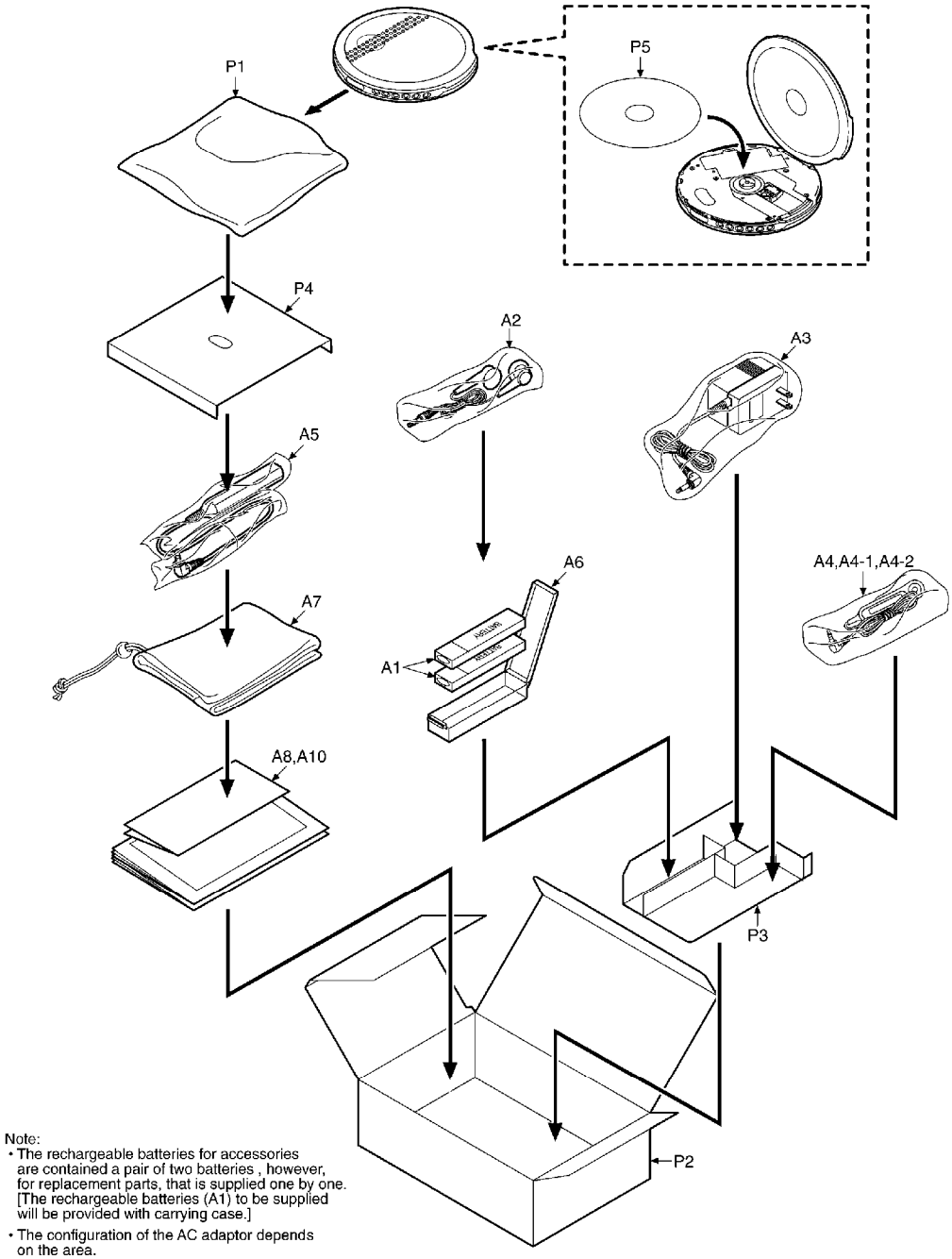


19. Traverse Unit Parts Location



Note : We do not supply those items of parts marked ✻.

20. Packaging



Note:
- The rechargeable batteries for accessories are contained a pair of two batteries , however, for replacement parts, that is supplied one by one. [The rechargeable batteries (A1) to be supplied will be provided with carrying case.]
- The configuration of the AC adaptor depends on the area.

21. Schematic Diagram for printing with letter size

F0212YM/KH

A MAIN CIRCUIT :POSITIVE VOLTAGE LINE :PLAYBACK SIGNAL LINE

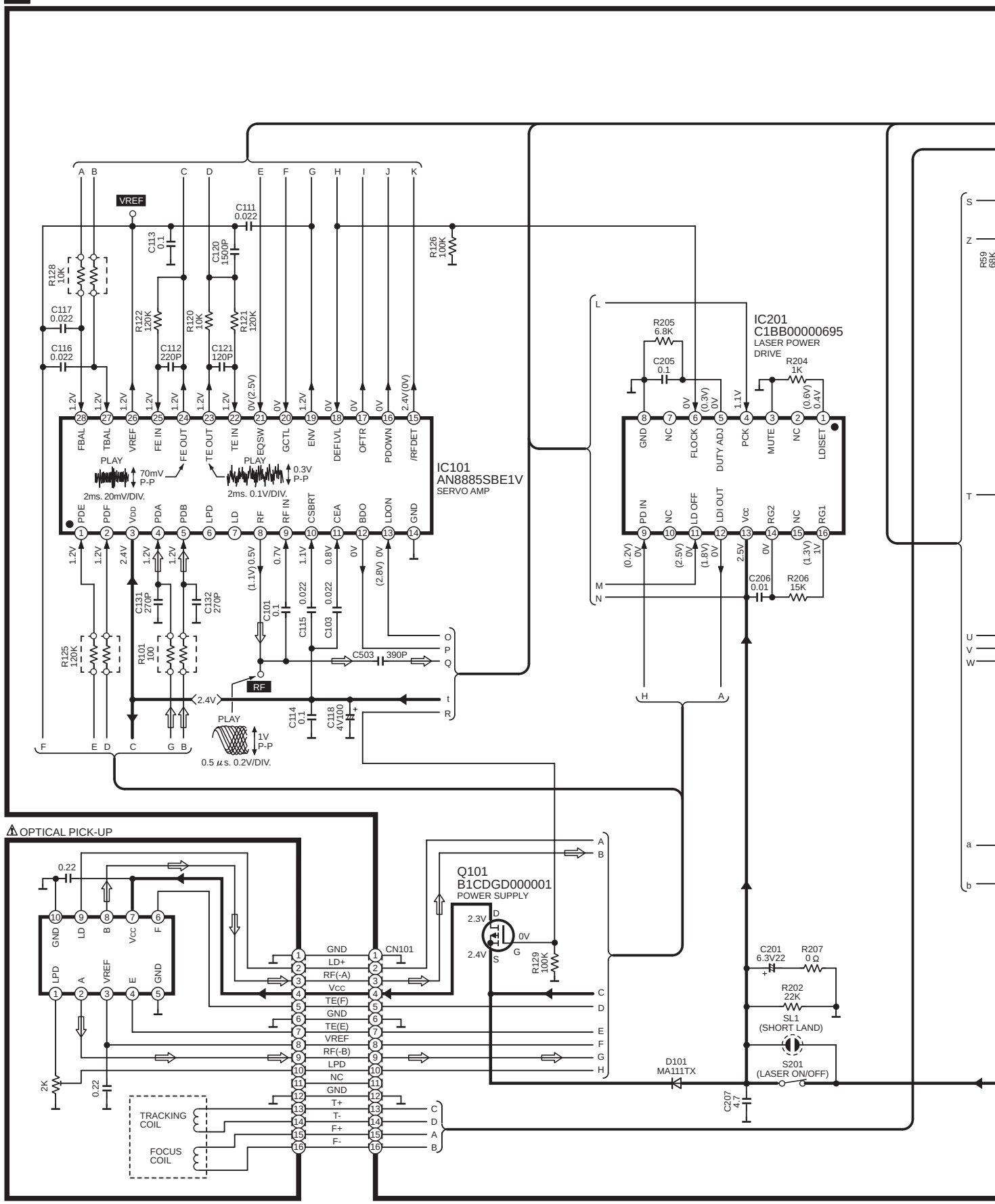
IC701 TA2131FL HEADPHONE AMP
Q903 DTA144EUA106 SWITCHING(BEEP)
Q601 XN0F261TX MUTING
Q901 DTA114YUA106 MUTING CONT.
Q701 XN0F261TX MUTING
JK601 OPT OUT/ OUT
JK701 HEADPHONE
IC81 C0EBD0000164 RESET
IC61 C0DBAFB00014 REGULATOR
Q501 B1CHMC000001 POWER SUPPLY
Q61 B1CHMC000001 REGULATOR
Q301 B1CDGD000001 POWER SUPPLY
Q604 2SB1218TX POWER SUPPLY
Q605 XP1501TX POWER SUPPLY
IC71 C0CBZBZ00002 REGULATOR
IC91 C0CBZAZ00001 REGULATOR
Q21 B1CHMC000001 REGULATOR
IC11 C0EBD0000164 RESET
Q302 DTA114YUA106 SWITCHING(CHARGE)
Q42 B1ABMD000004 SWITCHING(CHARGE)
Q81 2SD1819ATX SWITCHING(CHARGE)
Q12 B1CFNC000001 SWITCHING
IC92 C0DBAFA00021 REGULATOR
IC41 C0CBZBZ00001 REGULATOR
Q41 2SB1182TLPQR REGULATOR
IC12 C0CBAFD00002 REGULATOR
Q11 DTC114YUA106 POWER SUPPLY CONT.
Q13 XP161A1355PR POWER SUPPLY
ICP11 K5H1522A0018
2 RECHARGEABLE BATTERIES 2.4V
JK11 DC IN 4.5V
JK12 EXT BATT

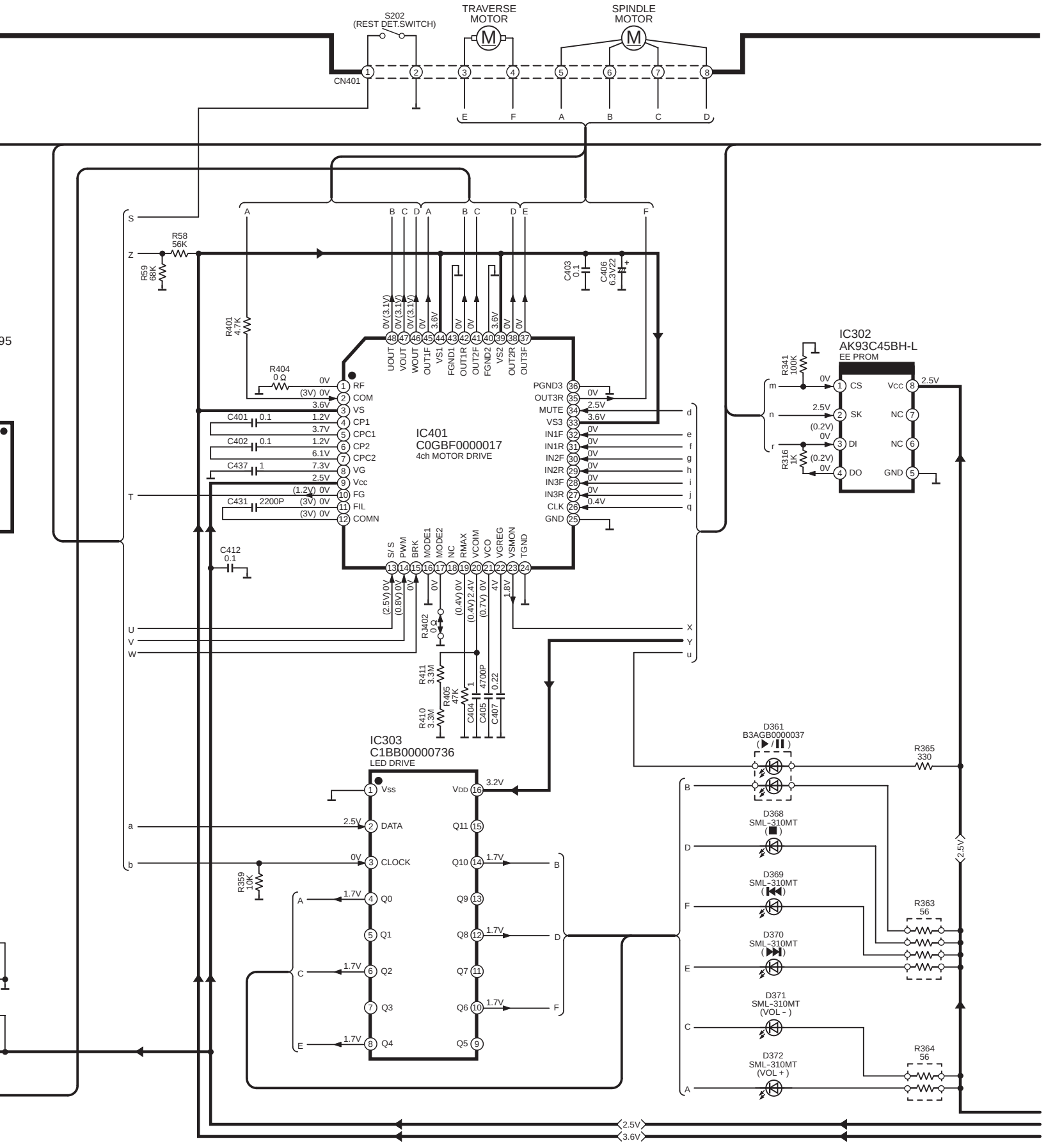
B BATTERY TERMINAL CIRCUIT

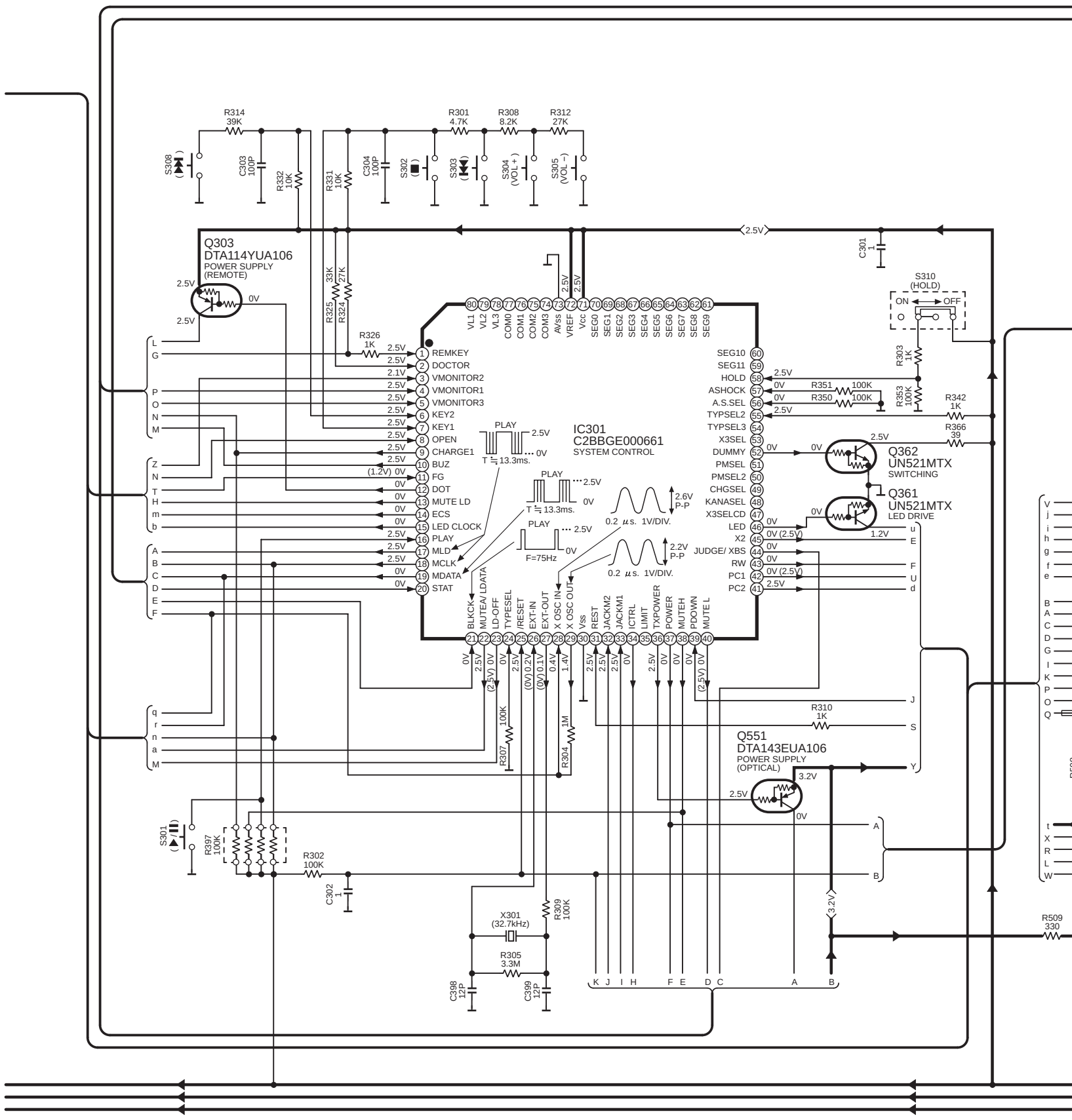
SL-CT700(GK,GD) MAIN,BATTERY TERMINAL CIRCUIT DIAGRAM

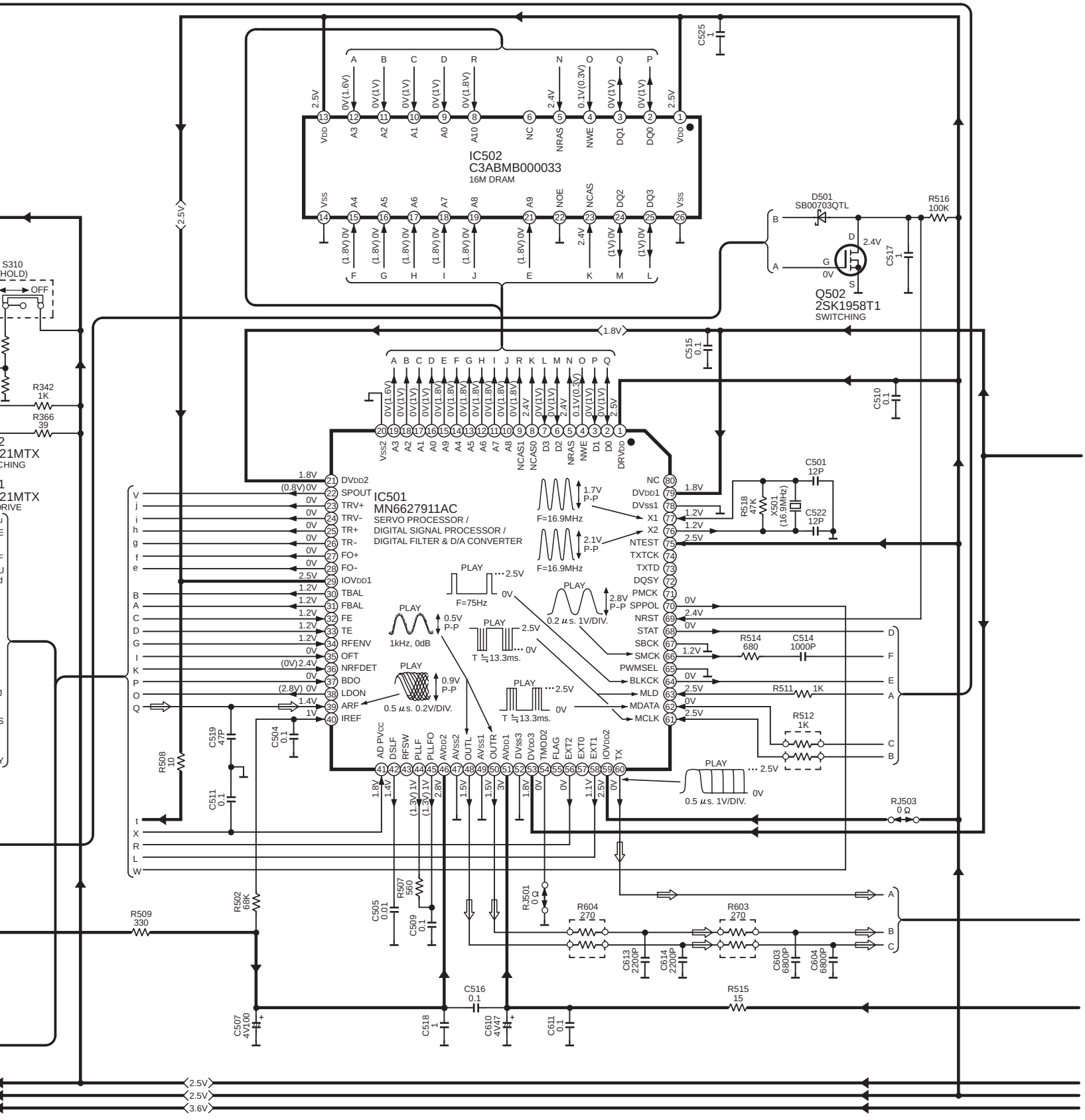
A MAIN CIRCUIT

:POSITIVE VOLTAGE LINE :PLAYBACK SIGNAL LINE



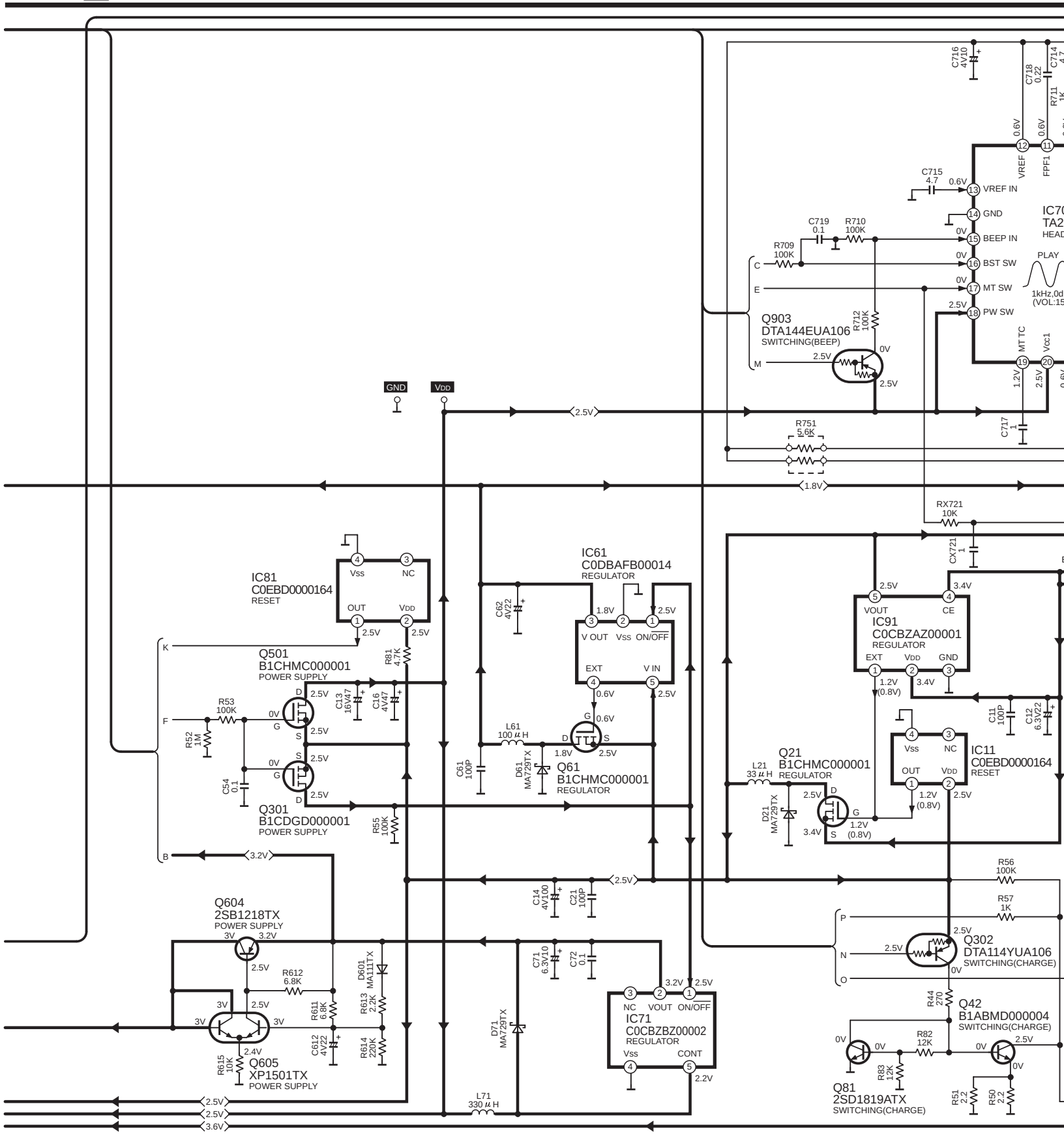

S202
(REST DET.SWITCH)
TRAVERSE
MOTOR
SPINDLE
MOTOR
CN401
IC401
C0GBF0000017
4ch MOTOR DRIVE
IC302
AK93C45BH-L
EE PROM
IC303
C1BB00000736
LED DRIVE
D361
B3AGB0000037
D368
SML-310MT
D369
SML-310MT
D370
SML-310MT
D371
SML-310MT
(VOL -)
D372
SML-310MT
(VOL +)
R58
56K
R59
68K
R401
4.7K
R404
0 Ω
C401
0.1
C402
0.1
C437
1
C431
2200P
C412
0.1
C403
0.1
C406
6.3V22
R341
100K
R316
1K
R402
0 Ω
R411
3.3M
R405
47K
R410
3.3M
C404
1
C405
4700P
C407
0.22
R359
10K
R365
330
R363
56
R364
56
2.5V
3.6V


Q303
DTA114YUA106
POWER SUPPLY
(REMOTE)
IC301
C2BBGE000661
SYSTEM CONTROL
Q362
UN521MTX
SWITCHING
Q361
UN521MTX
LED DRIVE
Q551
DTA143EUA106
POWER SUPPLY
(OPTICAL)
S310
(HOLD)
ON
OFF
REMKEY
DOCTOR
VMONITOR2
VMONITOR1
VMONITOR3
KEY2
KEY1
OPEN
CHARGE1
BUZ
FG
DOT
MUTE LD
ECS
LED CLOCK
PLAY
MLD
MCLK
MDATA
STAT
HOLD
ASHOCK
A.S.SEL
TYPSEL2
TYPSEL3
X3SEL
DUMMY
PMSEL
PMSEL2
CHGSEL
KANASEL
X3SELCD
LED
X2
JUDGE/ XBS
RW
PC1
PC2
X301
(32.7kHz)
R314 39K
R301 4.7K
R308 8.2K
R312 27K
R331 10K
R332 10K
R303 1K
R353 100K
R342 1K
R366 39
R351 100K
R350 100K
R326 1K
R325 33K
R324 27K
R310 1K
R307 100K
R304 1M
R309 100K
R302 100K
R397 100K
R305 3.3M
R509 330
C301 1
C302 1
C303 100P
C304 100P
C398 12P
C399 12P
S301
S302
S303
S304 (VOL+)
S305 (VOL−)
S308
PLAY
F=75Hz
T = 13.3ms.
0.2 μs. 1V/DIV.
2.6V P-P
2.2V P-P

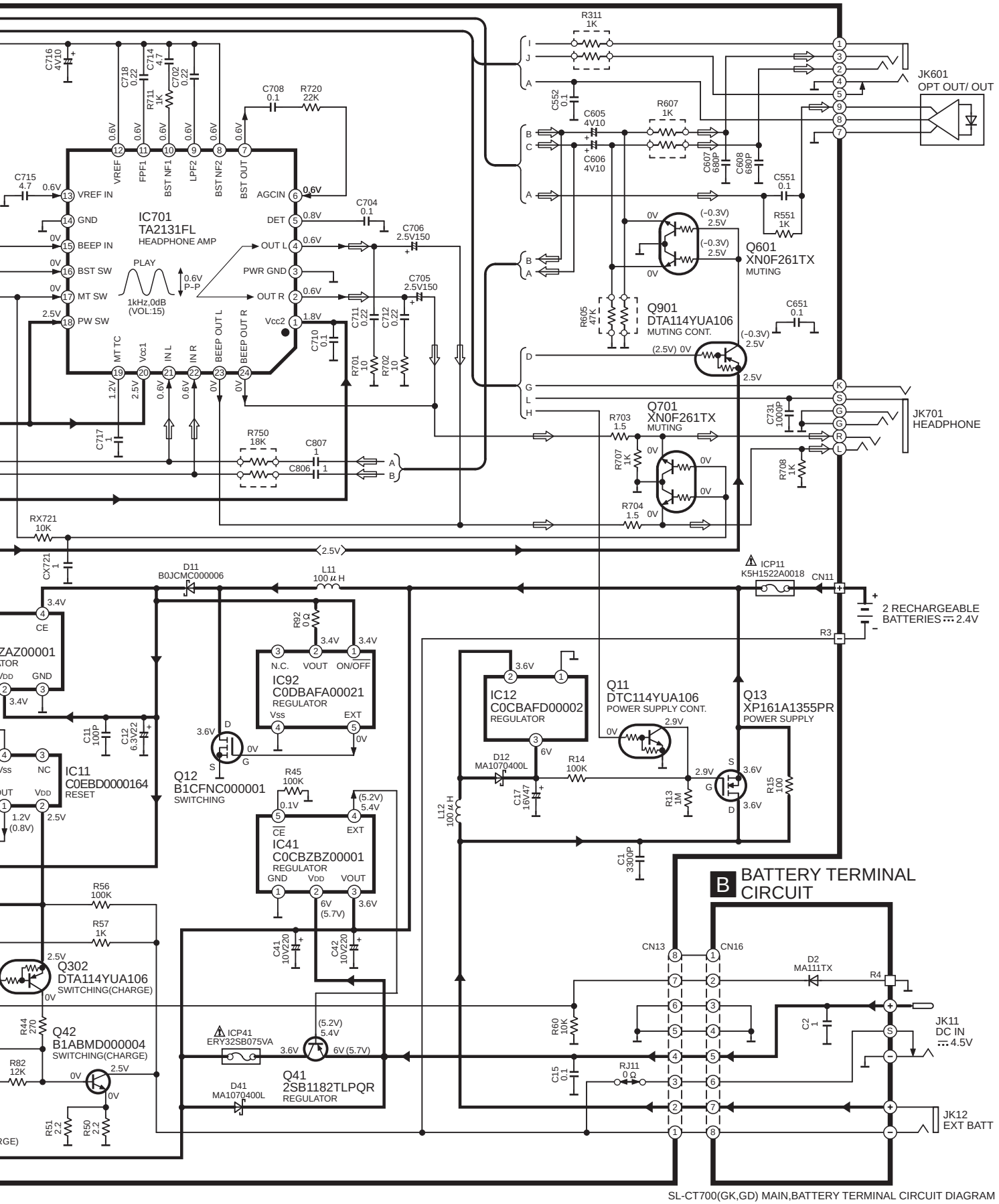

IC502
C3ABMB000033
16M DRAM
IC501
MN6627911AC
SERVO PROCESSOR /
DIGITAL SIGNAL PROCESSOR /
DIGITAL FILTER & D/A CONVERTER
D501
SB00703QTL
Q502
2SK1958T1
SWITCHING
F=16.9MHz
F=75Hz
1kHz, 0dB
0.2 µs. 1V/DIV.
0.5 µs. 0.2V/DIV.
0.5 µs. 1V/DIV.
T ≒13.3ms.
PLAY
2.5V
3.6V
1.8V

A MAIN CIRCUIT

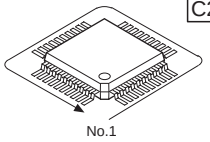
:POSITIVE VOLTAGE LINE :PLAYBACK SIGNAL LINE



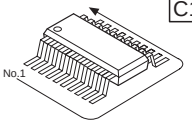
25	26	27	28	29	30


IC701
TA2131FL
HEADPHONE AMP
VREF IN
GND
BEEP IN
BST SW
MT SW
PW SW
VREF
FPF1
BST NF1
LPF2
BST NF2
BST OUT
AGCIN
DET
OUT L
PWR GND
OUT R
Vcc2
MT TC
Vcc1
IN L
IN R
BEEP OUT L
BEEP OUT R
PLAY
1kHz,0dB
(VOL:15)
0.6V P-P
JK601
OPT OUT/ OUT
Q601
XN0F261TX
MUTING
Q901
DTA114YUA106
MUTING CONT.
Q701
XN0F261TX
MUTING
JK701
HEADPHONE
IC92
C0DBAFA00021
REGULATOR
N.C.
VOUT
ON/OFF
Vss
EXT
IC11
C0EBD0000164
RESET
Q12
B1CFNC000001
SWITCHING
IC41
C0CBZBZ00001
REGULATOR
GND
VDD
VOUT
CE
EXT
IC12
C0CBAFD00002
REGULATOR
Q11
DTC114YUA106
POWER SUPPLY CONT.
Q13
XP161A1355PR
POWER SUPPLY
D12
MA1070400L
D11
B0JCMC000006
D41
MA1070400L
D2
MA111TX
ICP11
K5H1522A0018
ICP41
ERY32SB075VA
Q302
DTA114YUA106
SWITCHING(CHARGE)
Q42
B1ABMD000004
SWITCHING(CHARGE)
Q41
2SB1182TLPQR
REGULATOR
2 RECHARGEABLE
BATTERIES 2.4V
JK11
DC IN 4.5V
JK12
EXT BATT
B BATTERY TERMINAL
CIRCUIT
CN11
CN13
CN16
RX721 10K
CX721 1
L11 100μH
L12 100μH
C1 3300P
C2 1
C11 100P
C12 6.3V22
C15 0.1
C17 16V47
C41 10V220
C42 10V220
C551 0.1
C552 0.1
C605 4V10
C606 4V10
C607 680P
C608 680P
C651 0.1
C704 0.1
C705 2.5V150
C706 2.5V150
C708 0.1
C710 0.1
C711 0.22
C712 0.22
C716 4V10
C717 1
C718 0.22
C714 47
C702 0.22
C731 1000P
C807 1
C806 1
R311 1K
R607 1K
R551 1K
R605 47K
R651 0.1
R703 1.5
R704 1.5
R707 1K
R708 1K
R711 1K
R720 22K
R750 18K
R701 10
R702 10
R92 0Ω
R45 100K
R56 100K
R57 1K
R44 270
R82 12K
R51 2.2
R50 2.2
R60 10K
R4
R3
R14 100K
R13 1M
R15 100
RJ11 0Ω
C715 4.7
SL-CT700(GK,GD) MAIN,BATTERY TERMINAL CIRCUIT DIAGRAM

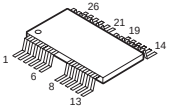
MN6627911AC	80PIN
C0GBF0000017	48PIN
C2BBGE000661	80PIN



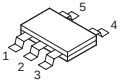
AN8885SBE1V	28PIN
C1BB00000736	16PIN
C1BB00000695	16PIN



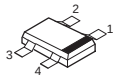
C3ABMB000033



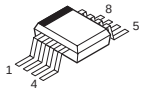
C0DBAFA00021
C0DBAFB00014
C0CBZAZ00001
C0CBZBZ00001
C0CBZBZ00002



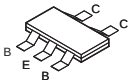
C0EBD0000164



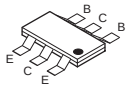
AK93C45BH-L



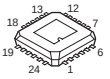
XP1501TX



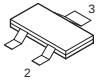
XN0F261TX



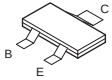
TA2131FL



C0CBAFD00002

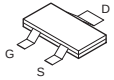


2SB1218TX
2SD1819ATX

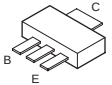


DTA114YUA106
DTA143EUA106
DTA144EUA106
DTC114YUA106
UN521MTX

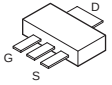
2SK1958T1
B1CDGD000001
B1CHMC000001
B1CFNC000001



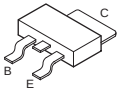
B1ABMD000004

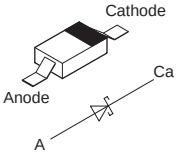


XP161A1355PR



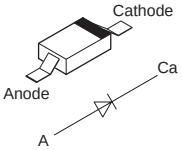
2SB1182TLPQR



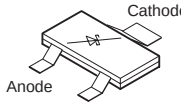


MA1070400L
MA729TX
B0JCMC000006

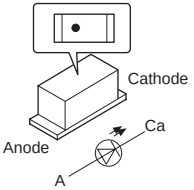
MA111TX



SB00703QTL



SML-310MT



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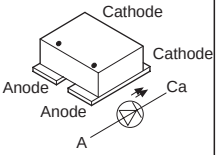
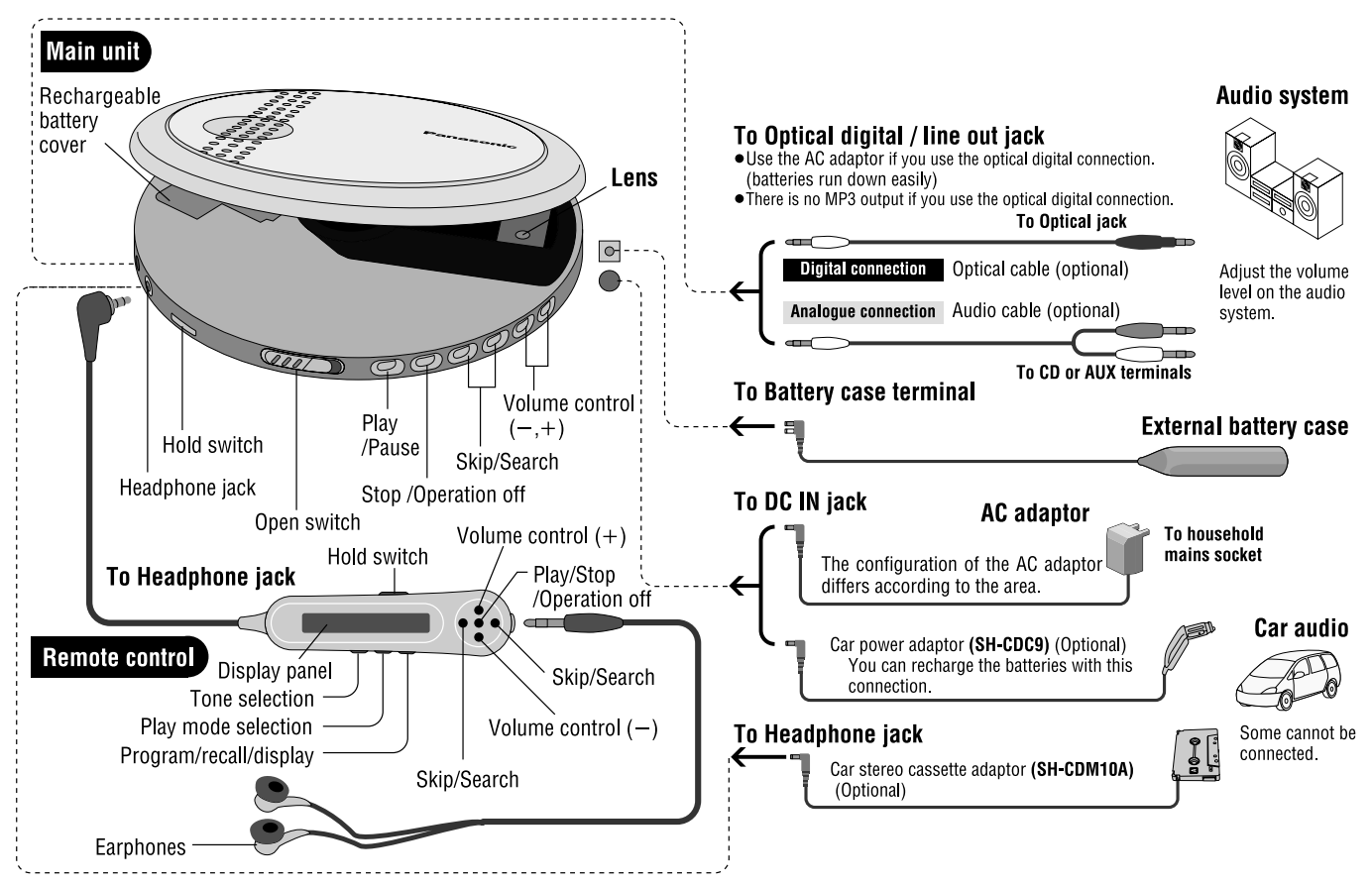



Main unit
Rechargeable battery cover
Lens
Hold switch
Headphone jack
Open switch
Play /Pause
Stop /Operation off
Skip/Search
Volume control (−,+)
To Headphone jack
Hold switch
Volume control (+)
Play/Stop /Operation off
Remote control
Display panel
Tone selection
Play mode selection
Program/recall/display
Skip/Search
Volume control (−)
Skip/Search
Earphones
To Optical digital / line out jack
●Use the AC adaptor if you use the optical digital connection. (batteries run down easily)
●There is no MP3 output if you use the optical digital connection.
To Optical jack
Digital connection
Optical cable (optional)
Analogue connection
Audio cable (optional)
To CD or AUX terminals
Audio system
Adjust the volume level on the audio system.
To Battery case terminal
External battery case
To DC IN jack
AC adaptor
The configuration of the AC adaptor differs according to the area.
To household mains socket
Car power adaptor (SH-CDC9) (Optional)
You can recharge the batteries with this connection.
Car audio
Some cannot be connected.
To Headphone jack
Car stereo cassette adaptor (SH-CDM10A) (Optional)

C1BB00000695
IC201
LASER POWER DRIVE

AN8885SBE1V
IC101
SERVO AMP

MN6627911AC
IC501
SERVO PROCESSOR / DIGITAL SIGNAL PROCESSOR
DIGITAL FILTER & D/A CONVERTER

OPTICAL PICK-UP

SEMICONDUCTOR LASER

PHOTO DETECTOR

FOCUS COIL

TRACKING COIL

TRAVERSE MOTOR

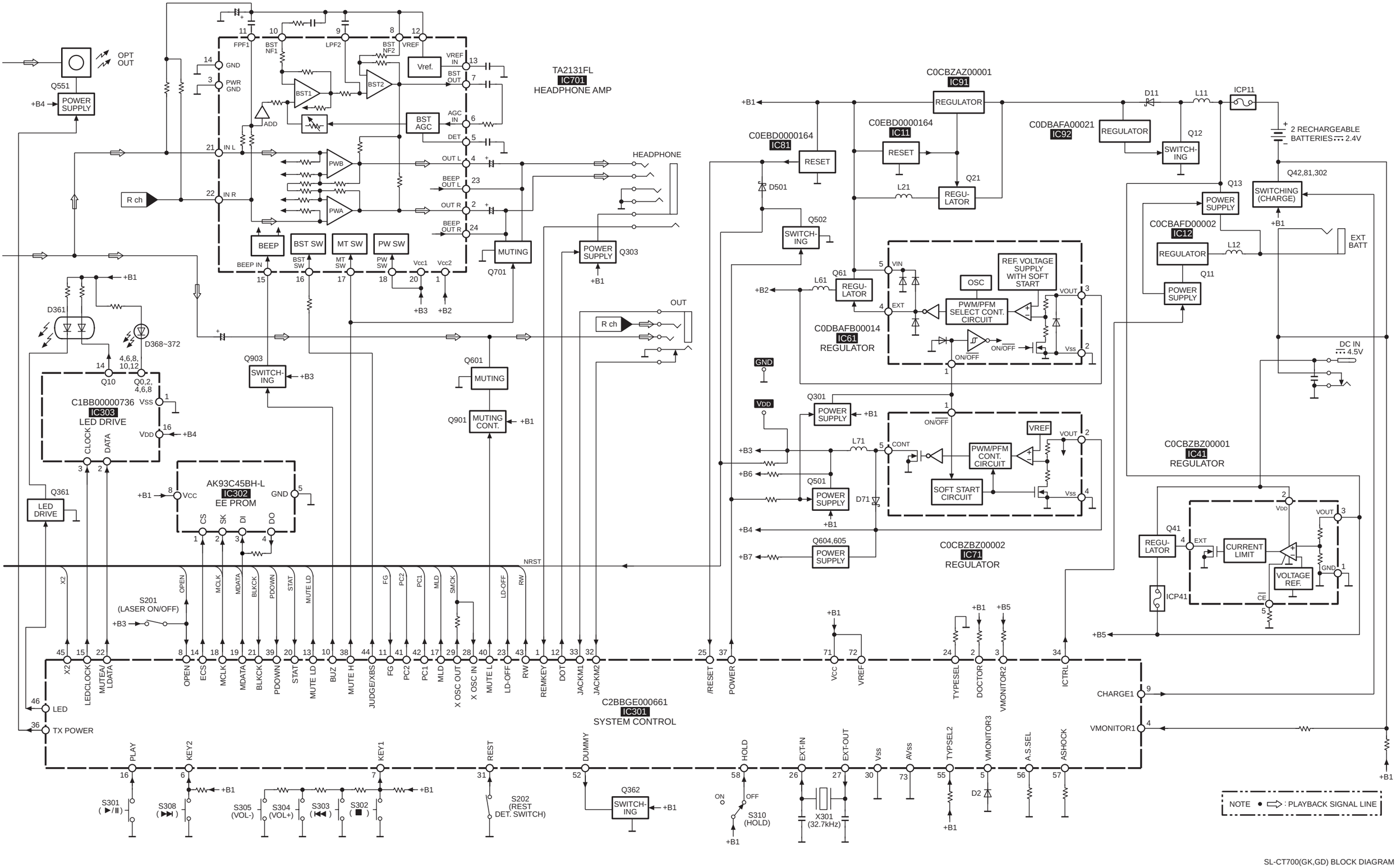
SPINDLE MOTOR

C0GBF0000017
IC401
4ch MOTOR DRIVE

C3ABMB000033
IC502
16M DRAM

X501
(16.9MHz)

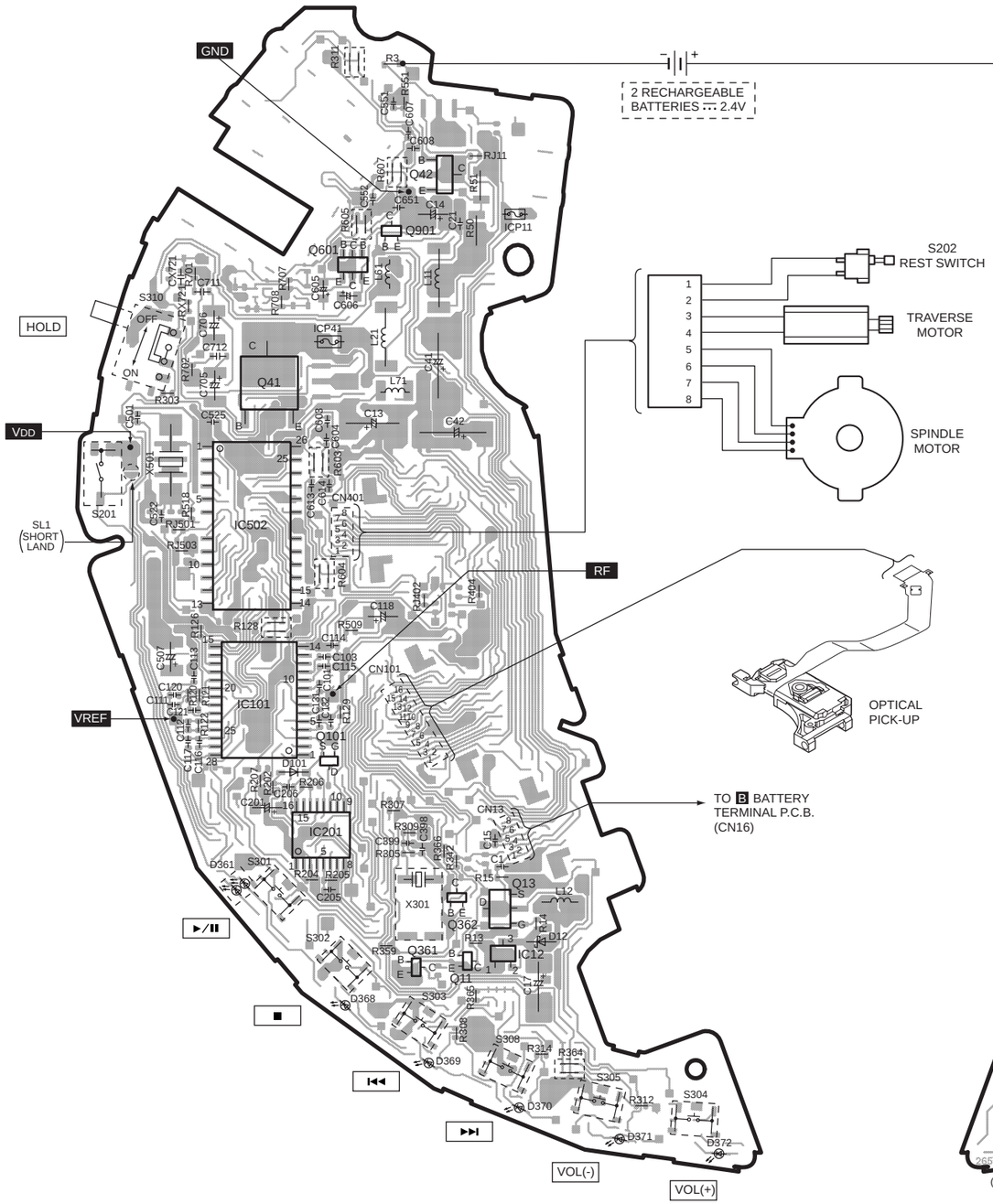
SL-CT700(GK,GD) BLOCK DIAGRAM



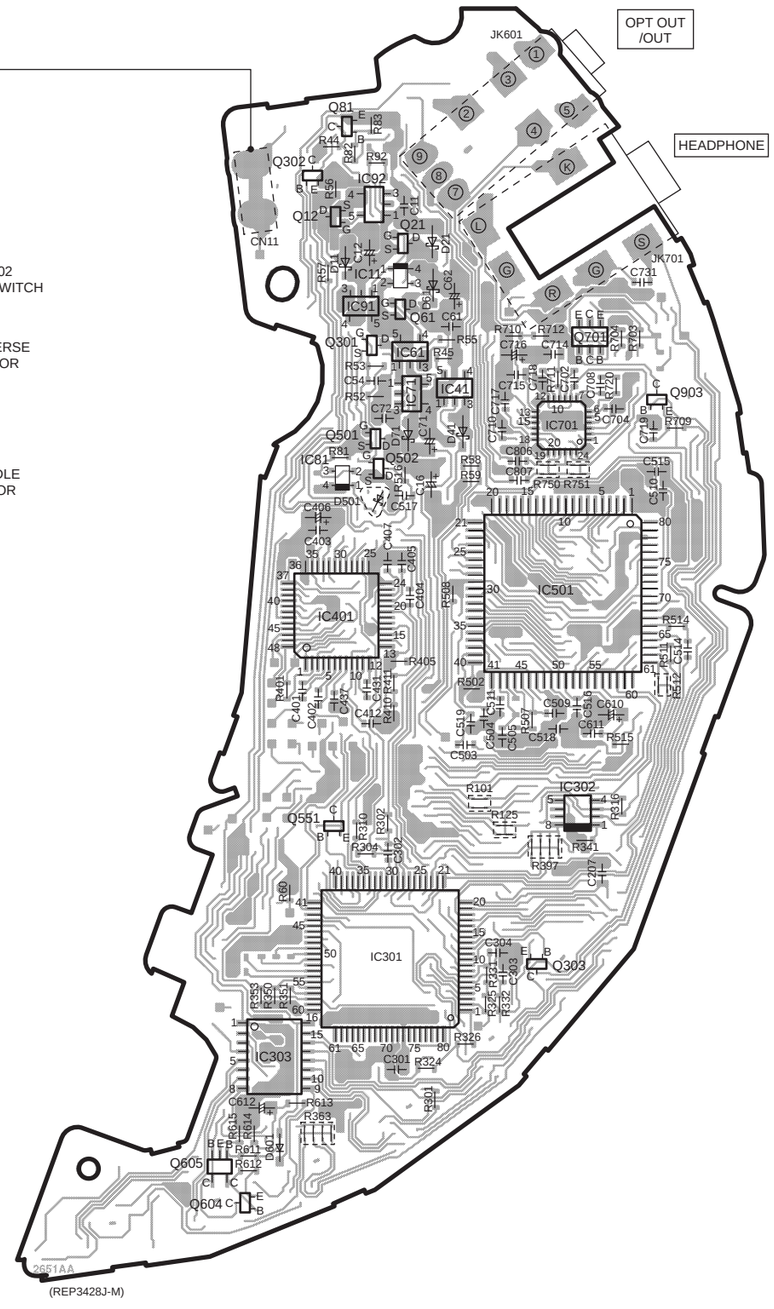
SL-CT700(GK,GD) BLOCK DIAGRAM

Note: This printed circuit board diagram may be modified at any time with the development of new technology.

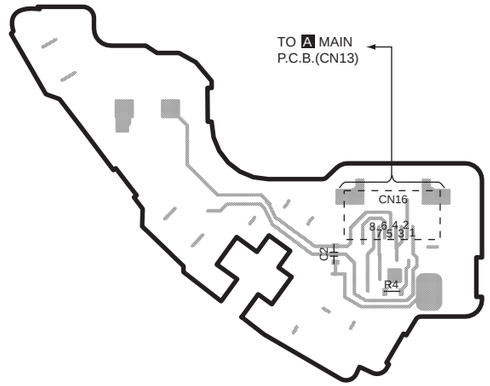
A MAIN P.C.B.(SIDE:A)



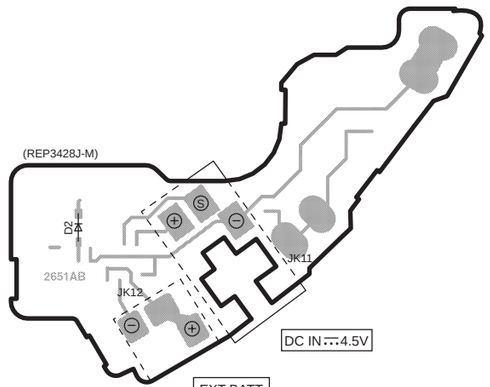
A MAIN P.C.B.(SIDE:B)



B BATTERY TERMINAL P.C.B.(SIDE:A)



B BATTERY TERMINAL P.C.B.(SIDE:B)



A MAIN CIRCUIT

:POSITIVE VOLTAGE LINE :PLAYBACK SIGNAL LINE

S202 (REST DET.SWITCH)

CN401

TRAVERSE MOTOR

SPINDLE MOTOR

IC101 AN8885SBE1V SERVO AMP

FBAL TBAL VREF FE IN FE OUT TE OUT TE IN EQSW GCTL ENV DEFLVL OFTR PDOWN /RFDET

PDE PDF VDD PDA PDB LPD LD RF RF IN CSBRT CEA BDO LDON GND

IC201 C1BB00000695 LASER POWER DRIVE

GND NC FLOCK DUTY ADJ PCK MUTE NC LDISET

PD IN NC LD OFF LDI OUT Vcc RG2 NC RG1

IC401 C0GBF0000017 4ch MOTOR DRIVE

RF COM VS CP1 CPC1 CP2 CPC2 VG Vcc FG FIL COMN

UOUT VOUT WOUT OUT1F VS1 FGND1 OUT1R OUT2F FGND2 VS2 OUT2R OUT3F

PGND3 OUT3R MUTE VS3 IN1F IN1R IN2F IN2R IN3F IN3R CLK GND

S/S PWM BRK MODE1 MODE2 NC RMAX VCOIM VCO VGREG VSMON TGND

IC302 AK93C45BH-L EE PROM

CS SK DI DO Vcc NC NC GND

IC303 C1BB00000736 LED DRIVE

Vss DATA CLOCK Q0 Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 VDD

Q101 B1CDGD000001 POWER SUPPLY

GND LD B Vcc F LPD A VREF E GND

GND LD+ RF(-) Vcc TE(F) GND TE(E) VREF RF(-) LPD NC GND T+ T- F+ F-

CN101

TRACKING COIL

FOCUS COIL

⚠ OPTICAL PICK-UP

D101 MA111TX

SL1 (SHORT LAND)

S201 (LASER ON/OFF)

D361 B3AGB0000037

D368 SML-310MT

D369 SML-310MT

D370 SML-310MT

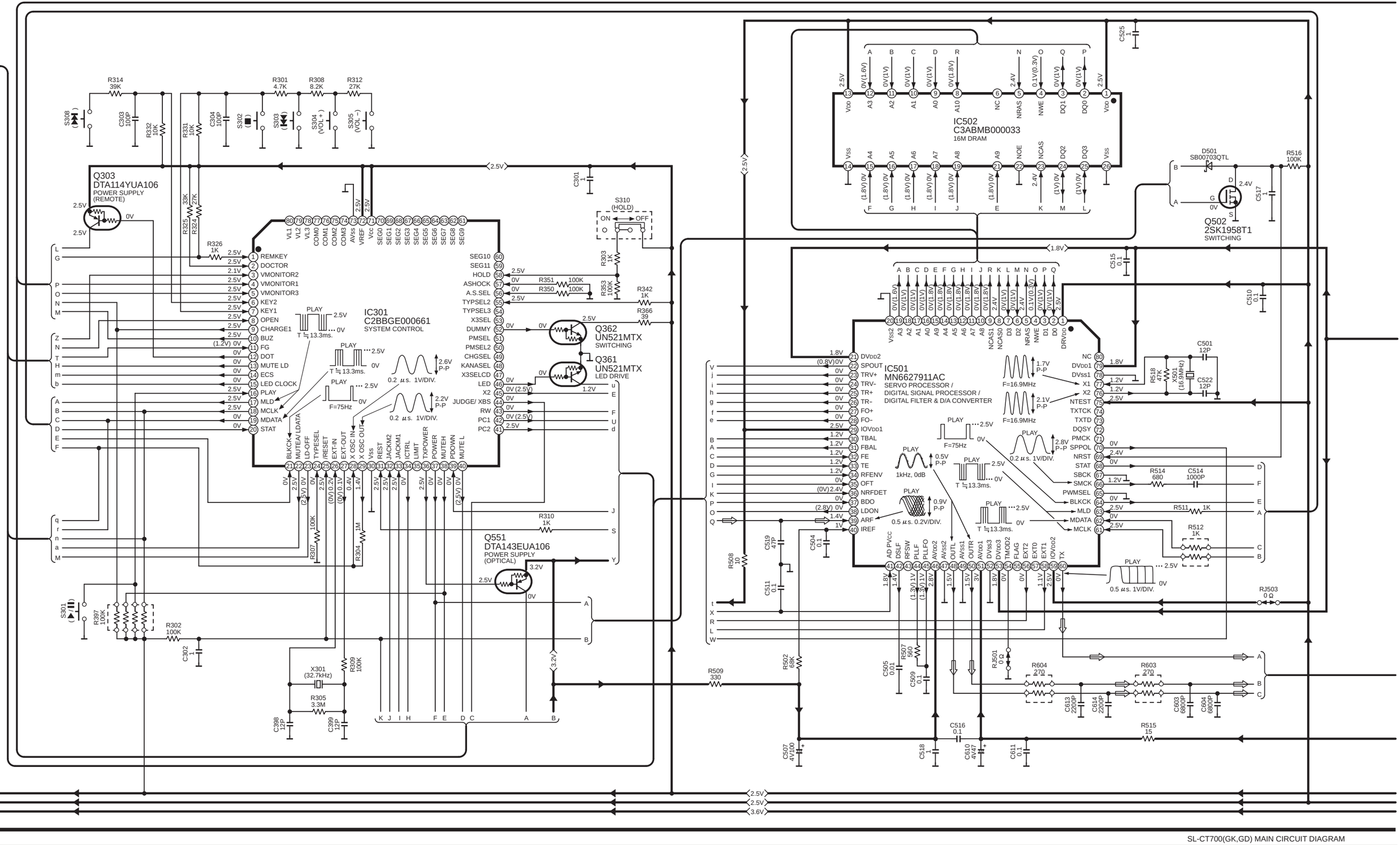
D371 SML-310MT (VOL –)

D372 SML-310MT (VOL +)

2.5V

3.6V

SL-CT700(GK,GD) MAIN CIRCUIT DIAGRAM


IC502
C3ABMB000033
16M DRAM
IC501
MN6627911AC
SERVO PROCESSOR /
DIGITAL SIGNAL PROCESSOR /
DIGITAL FILTER & D/A CONVERTER
IC301
C2BBGE000661
SYSTEM CONTROL
Q303
DTA114YUA106
POWER SUPPLY
(REMOTE)
Q551
DTA143EUA106
POWER SUPPLY
(OPTICAL)
Q362
UN521MTX
SWITCHING
Q361
UN521MTX
LED DRIVE
Q502
2SK1958T1
SWITCHING
D501
SB00703QTL
S310
(HOLD)
ON OFF
REMKEY
DOCTOR
VMONITOR2
VMONITOR1
VMONITOR3
KEY2
KEY1
OPEN
CHARGE1
BUZ
FG
DOT
MUTE LD
ECS
LED CLOCK
PLAY
MLD
MCLK
MDATA
STAT
BLKCK
MUTEA/ LDATA
LD-OFF
TYPESEL
/RESET
EXT-IN
EXT-OUT
X OSC IN
X OSC OUT
Vss
REST
JACKM2
JACKM1
ICTRL
LIMIT
TXPOWER
POWER
MUTEH
PDOWN
MUTEL
SEG10
SEG11
HOLD
ASHOCK
A.S.SEL
TYPSEL2
TYPSEL3
X3SEL
DUMMY
PMSEL
PMSEL2
CHGSEL
KANASEL
X3SELCD
LED
X2
JUDGE/ XBS
RW
PC1
PC2
VL1
VL2
VL3
COM0
COM1
COM2
COM3
AVss
VREF
Vcc
SEG0
SEG1
SEG2
SEG3
SEG4
SEG5
SEG6
SEG7
SEG8
SEG9
DVDD2
SPOUT
TRV+
TRV-
TR+
TR-
FO+
FO-
IOVDD1
TBAL
FBAL
FE
TE
RFENV
OFT
NRFDET
BDO
LDON
ARF
IREF
AD PVCC
DSLF
RFSW
PLLF
PLLFO
AVDD2
AVSS2
OUTL
AVSS1
OUTR
AVDD1
DVSS3
DVDD3
TMOD2
FLAG
EXT2
EXT0
EXT1
IOVDD2
TX
NC
DVDD1
DVSS1
X1
X2
NTEST
TXTCK
TXTD
DQSY
PMCK
SPPOL
NRST
STAT
SBCK
SMCK
PWMSEL
BLKCK
MLD
MDATA
MCLK
F=16.9MHz
F=75Hz
1kHz, 0dB
0.2 µs. 1V/DIV.
0.5 µs. 1V/DIV.
T ≒13.3ms.
X301
(32.7kHz)
R305
3.3M
R307
100K
R304
1M
R302
100K
R309
100K
R310
1K
R509
330
R502
68K
R508
10
R511
1K
R512
1K
R514
680
R515
15
R516
100K
R518
47K
X501
(16.9MHz)
C501
12P
C522
12P
C514
1000P
C516
0.1
C517
1
C518
1
C519
47P
C525
1
C301
1
C302
1
C303
100P
C304
100P
C388
12P
C389
12P
C504
0.1
C505
0.01
C507
4V100
C509
0.1
C510
0.1
C511
0.1
C515
0.1
C610
4V47
C611
0.1
C613
2200P
C614
2200P
C603
6800P
C604
6800P
R303
1K
R325
33K
R324
27K
R326
1K
R331
10K
R332
10K
R342
1K
R366
39
R351
100K
R350
100K
R353
100K
R397
100K
R501
0 Ω
R503
0 Ω
R507
560
R604
270
R603
270
RJ503
0 Ω
R314
39K
R301
4.7K
R308
8.2K
R312
27K
S301
S302
S303
S304
(VOL+)
S305
(VOL−)
2.5V
1.8V
3.2V
3.6V